


Illustrations (Journals): Taxon (63 (2): 270 (2014)).


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acuminate, 2.5–3 mm long, 0.9 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.05–0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, dark brown, without keels. Upper glume lateral veins obscure. Upper glume surface puberulous. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, light brown, obscurely veined, puberulous, acuminate. Fertile lemma elliptic, dorsally compressed, 2.4 mm long, 0.8 mm wide, coriaceous, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, coriaceous.


Illustrations (Books): A.S.Hitchcock, Manual of the Grasses of the West Indies (1936) (158, Fig. 100).


Derivation (Clifford & Bostock 2007): Gk. pipto, fall down; stachys, ear of corn. Spikelets deciduous.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths thickened and forming a bulb. Culms 30–75 cm long. Culm-nodes glabrous. Leaves mostly basal. Ligule a ciliate membrane, 0.5–1 mm long. Leaf-blades linear or lanceolate, 10–30 cm long, 2–6 mm wide. Leaf-blade surface glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6–7 mm long, falling entire. Spikelet callus linear, 2 mm long, pilose. Spikelet callus hairs 0.33 length of spikelet.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, coriaceous, 5–7 -veined, scabrous, rough above, obtuse. Fertile lemma linear, membranous, without keel, 3 -veined, 0–3 -veined. Lemma apex obtuse. Palea hyaline, without keels.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 2. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State.** Caribbean. Cuba, Jamaica.


**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L. *acuo*, sharpen. Spikelets acute to acuminate.

**Classification.** Subfamily Pooideae, Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, slender, 95 cm long. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 1.5–2 mm long, lacerate, acute. Leaf-blades involute, 10–23 cm long, 1–2 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 15–20 cm long. Primary panicle branches ascending or spreading, 3–6 cm long. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 11–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 11–12 mm long, 1.1–1.2 length of upper glume, hyaline, purple, without keels, 3 -veined. Lower glume lateral veins with cross-veins. Lower glume apex acute. Upper glume lanceolate, 9–10 mm long, hyaline, purple, without keels, 5–7 -veined. Upper glume lateral veins with cross-veins. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 45–50 mm long overall, with 30–35 mm long limb, with twisted column.

**Distribution (TDWG). Continent.** North America.

**Country /Province /State.** Mexico. Northeast Mexico.

**Coahuila.**


**Derivation** (Clifford & Bostock 2007): *altus* (L.) tall. Culms tall, relative to those of other members of the genus.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, robust, 136.8–233.99 cm long. Culm-internodes distally glabrous. Leaves basal and cauline. Leaf-sheaths smooth or scaberulous, glabrous on surface. Ligule 4–8 mm long on basal shoots. Leaf-blades flat or involute, 30–60 cm long, 3–7 mm wide, stiff. Leaf-blade surface scabrous. Leaf-blade margins scabrous. Leaf-blade apex attenuate, antorse or scabrous.

**Inflorescence.** Panicle contracted, linear, 23.24–33.6 cm long, 1.24–1.8 cm wide, bearing few spikelets. Primary panicle branches appressed, 5–10 cm long, bearing 10–11 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets. Spikelets lanceolate, suberete, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus straight, base acute. Floret callus pubescent, acute.

**Glumes.** Glumes persistent, similar, subequal in width, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–11 mm long, 1 length of upper glume, hyaline, 3 -veined. Upper glume lanceolate, 7–8 mm long, hyaline, 3 -veined. Upper glume apex setaceous acuminate.

**Florets.** Fertile lemma linear or lanceolate, suberete, 4–5 mm long, coriaceous, dark brown, without keel. Lemma surface pilose. Lemma margins covering most of palea. Lemma apex awned, 1–2 -awned. Principal lemma awn geniculate, 8–12 mm long overall, with twisted column. Palea 2 -veined, without keels.

**Flower and Fruit.** Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: North America.

**Country /Province /State.** Mexico. Northeast Mexico.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 40–85 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous or pubescent. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs pubescent. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades flat or involute, 15–25 cm long, 1–2.5 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 9–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1.5 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, with lower wider than upper, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–15 mm long, 1.2–1.3 length of upper glume, hyaline, much thinner above, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–12
mm long. 1.7–2 length of adjacent fertile lemma, hyaline, much thinner above, without keels, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 4–6 mm long, coriaceous, pallid, without keel, 5 -veined, more than 3-veined. Lemma surface asperulous, rough above, pubescent, hairy all along or below. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigenicate, 40–70 mm long overall, with 30–50 mm long limb, with twisted column. Column of lemma awn 10–20 mm long, glabrous. Palea without keels.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as Oryzopsis).


**Derivation (Clifford & Bostock 2007):** in honor of Lois Goodell Arnow (1921-) United States botanist.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Butt sheaths persistent and investing base of culm. Culms erect, 15–75 cm long. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs lacking or ciliate. Ligule an eciliate membrane, 1–4 mm long. Leaf-blades involute, 2 mm wide. Leaf-blade surface smooth or scaberulous. Leaf-blade apex attenuate, simple or filiform.

**Inflorescence.** Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle contracted, linear, 5–20 cm long, 0.5–2.8 cm wide. Primary panicle branches appressed or ascending, 0.5–2.5(–5) cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, dorsally compressed, 5.1–6.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.2–0.4 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 5.1–6.1 mm long. 1.2 length of upper glume, membranous, without keels, 3 -veined. Lower glume lateral veins prominent. Lower glume surface puberulous. Lower glume apex acuminate. Upper glume ovate, 4.3–5.2 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume lateral veins prominent. Upper glume surface puberulous. Upper glume apex acuminate.

**Florets.** Fertile lemma ovate, dorsally compressed, 2.9–3.7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface hirsute, hairy on back or on veins. Lemma margins convolute, covering most of palea. Lemma hairs white, 2–3 mm long. Lemma apex awned, 1 -awned. Principal lemma awn straight, 3–4.4 mm long overall, deciduous. Palea coriaceous, 2 -veined, without keels.

**Flower and Fruit.** Anthers 3. 1 mm long.


**Illustrations:** None found.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. bractus, bract; -ata, possessing. Panicle or inflorescence branches subtended by leafy bracts.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, curved, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–11 mm long, 1.2 length of upper glume, hyaline, without keels, 3 -veined. Lower


**Type** from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: China: Gansu: Minxian, ca. 2100 m, (HT: ?).

**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 281).


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Cataphylls evident. Culms erect, 150 cm long, 2–3 -noded. Leaf-sheaths longer than adjacent culm internode, smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, 1.4 mm long. Leaf-blades linear, involute, 25–50 cm long, 2–4 mm wide. Leaf-blade surface pilose, hairy abaxially. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 30 cm long, 5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–10 mm long, puberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 6–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 6 mm long, 0.9 length of upper glume, membranous, much thinner on margins, purple, 1-keeled, 5–7 -veined. Lower glume apex acute. Upper glume lanceolate, 6.5 mm long, membranous, with hyaline margins, purple, 1-keeled, 5 -veined. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, subterete, 5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma margins convolute, covering most of palea, ciliate. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 3–4 mm long overall. Palea 1 length of lemma, 2 -veined, without keels. Palea surface puberulous, hairy on back, hairy below.

**Flower and Fruit.** Lodicules 3. Anthers 3, 3.5–4 mm long, yellow, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp. Hilum linear.


**Recent Synonyms:** *Stipa bromoides* (L.) Dörfl., *Herb. Norm.*, Cent. 34: 129, No. 3386 (1897).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling Bromus, usually with respect to the inflorescence.


Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes short, firm. Culms erect, 50–100 cm long. Leaves basal and cauline, differentiated into sheath and blade. Leaf-sheaths wider than blade at the collar, smooth, outer margin glabrous or hairy. Leaf-sheath auricles absent or erect. Ligule an eciliate membrane, 0.5 mm long, membranous, truncate. Leaf-blades filiform, convolute, 15–35 cm long, 0.5–1 mm wide. Leaf-blade surface glabrous or pubescent (minutely), hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or elliptic, loose to effuse, 15–30 cm long. Primary panicle branches appressed to ascending, naked below or bearing spikelets almost to the base. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flattened, straight, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 9–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.2–0.3 mm long, bearded, obtuse.

Glumes. Glumes similar, subequal in width, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–11 mm long, 1 length of upper glume, membranous, 3 -veined (vains very prominent). Lower glume lateral veins without connecting veins or with cross-veins. Lower glume surface glabrous or puberulous. Lower glume apex acute to acuminate, mucronate. Upper glume lanceolate, 7–10 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume lateral veins without cross-veins or with cross-veins. Upper glume apex acute to acuminate.

Florets. Fertile lemma linear to lanceolate, suberete, 5.5–7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface villous, hairy below. Lemma margins convolute, covering most of palea. Lemma apex lobed, 2 -fid, with a short cylindrical neck, awned, 1 -awned. Principal lemma awn apical, straight, 1.5–2.5 mm long overall, limb scaberulous. Palea lanceolate, 0.6–0.7 length of lemma, membranous, 2 -veined, without keels. Palea apex lobed.


Region. Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


Recent Synonyms: Calamagrostis argentea DC., Fl. Fr. 3: 25 (1805).

Illustrations: None found.


Derivation (Clifford & Bostock 2007): Gk. kalamos, reed; agrostis, a type of grass.


Habit, Vegetative Morphology. Perennial. Caespitose. Cataphylls evident. Culms robust, 60–120 cm long. Leaf-sheaths smooth, outer margin glabrous or hairy. Leaf-sheath oral hairs lacking or ciliate. Ligule an eciliate membrane, 0.3 mm long. Leaf-blades involute, 2–3 mm wide. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 8–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface glabrous or puberulous. Lower glume apex acute. Upper glume lanceolate, 8–9 mm long, membranous, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, subterete, 3–4 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma hairs 3–4 mm long. Lemma apex awned, 1 -awned. Principal lemma awn straight or curved, 10 mm long overall. Palea without keels.


2n = 24 (2 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe.

**Region.** Northern Europe (*), Middle Europe, Southwestern Europe, Southeastern Europe.

**Country /Province /State.** : GB Aliens (Ryves et al). : Austria, Germany, Switzerland. : France, Spain. : Albania, Bulgaria, Greece, Italy, Romania, Yugoslavia.


**TYPE** from South Africa. **Basionym or Replaced Name:** *Milium capense* L., *Mantissa Plantarum* 75 (1771). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: "Habitat ad Cap. b. spei."); South Africa, Cape: Coll?.

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From the Cape of Good Hope, South Africa.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms decumbent, 10–30 cm long. Ligule an eciliate membrane. Leaf-blades involute, 5–15 cm long, 1–1.5 mm wide, glaucous. Leaf-blade surface glabrous or pubescent, hairy adaxially. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, linear, 5–15 cm long, 1 cm wide. Primary panicle branches appressed, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1 mm long, bearded, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–20 mm long, 1 length of upper glume, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 10–20 mm long, 2 length of adjacent fertile lemma, hyaline, without keels, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 5–7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma apex entire, surmounted by a ring of hairs, awned, 1 -awned. Principal lemma awn bigeniculate, twisted together, 60–70 mm long overall, with twisted column. Column of lemma awn 30 mm long, hirtellous. Palea elliptic, 0.4 length of lemma, 2 -veined, without keels.


**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Southern Africa. Western Cape.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): From Tjuk-Caragan peninsula which projects into the Caspian Sea.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 30–100 cm long. Ligule an eciliate membrane, 0.7–0.9 mm long. Leaf-blades filiform, convolute, 10–20 cm long, 1–3 mm wide, glaucous. Leaf-blade surface scaberulous, rough adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 4.2–6.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.3 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 1 length of upper glume, membranous, without keels, 1–3 -veined. Lower glume apex acute or acuminate. Upper glume elliptic, 4.2–6.3 mm long, membranous, without keels, 3 -veined. Upper glume apex acute or acuminate.

Florets. Fertile lemma elliptic, subterete, 3–4 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight or curved, 7–15 mm long overall, without a column or with a straight or slightly twisted column, deciduous. Palea 2 -veined, without keels.


Achnatherum chingii (Hitchcock) Keng.

Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online (as Stipa).


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 286).


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 80 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades flexuous, filiform, 15–20 cm long, 0.5–1 mm wide. Leaf-blade surface ribbed, scaberulous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, acute.
Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels. Lower glume apex obtuse. Upper glume lanceolate, 7–9 mm long, membranous, without keels. Upper glume apex obtuse.

Florets. Fertile lemma lanceolate, subterete, 6 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 13 mm long overall, with twisted column. Middle segment of lemma awn 4 mm long. Column of lemma awn 1 mm long, puberulous. Palea without keels.


Country /Province /State. China. China South Central, China North-Central, Qinghai, Tibet.


Illustrations: None found.


Classification. Subfamily Pooideae, Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 80 cm long, 4–6 -node d. Lateral branches sparse, arising from lower culm. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades involute, 5–15 cm long, 1–2 mm wide. Leaf-blade surface glabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent (white), acute.


Florets. Fertile lemma linear, subterete, 14–16 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white. Lemma apex with a short cylindrical neck or surmounted by a ring of hairs, with this appendage 1.2–1.4 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 20–25 mm long overall, with twisted column. Palea 2 -awned, without keels.


Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico.

Mexico State. Hidalgo.


DESCRIPTION


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 25–50 cm long. Ligule an eciliate membrane, 3–6 mm long. Leaf-blades filiform, involute, 4–20 cm long, 1–2 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, dorsally compressed, 5.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.8 mm long, pilose.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 5.5–6 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume surface glabrous or puberulous. Lower glume apex acuminate. Lower glume surface glabrous or puberulous. Upper glume apex acuminate.

**Florets.** Fertile lemma ovate, dorsally compressed, 3 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs 0.5–1.5 mm long. Lemma apex dentate, 2 -fid, with lobes 0.5 mm long, awned, 1 -awned. Principal lemma awn from a sinus, curved, 7–8 mm long overall, deciduous.

**Flower and Fruit.** 2n = 48 (FNA).

**Distribution (TDWG).** Continent. North America.

**Country/Province/State.** Northwest USA. Montana, Wyoming.


**Derivation** (Clifford & Bostock 2007): L. corona, crown; -ata, possessing. Lemma densely appressed-villous with the hairs projecting above the apex to form a pappus-like crown.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–200 cm long, 2–6 mm diam. Culm-internodes distally glabrous or pubescent. Leaf-sheaths smooth, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 2 mm long. Leaf-blades flat or involute, 15–30 cm long, 3–7 mm wide. Leaf-blade apex attenuate, filiform.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or lanceolate, 20–50 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, curved, 1.5 mm long, pilose, acute.
**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 20 mm long, 1.1–1.5 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 13–18 mm long, 2 length of adjacent fertile lemma, hyaline, without keels, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 7.5–9 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma hairs 2–4 mm long. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 35–50 mm long overall, with twisted column. Column of lemma awn 10 mm long. Palea 2 -veined, without keels.


*2n = 40 (FNA).*

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southwestern USA, Mexico. California.


Derivation (Clifford & Bostock 2007): L. *curvus*, bent; *folium*, leaf. The leaf-blades become spirally coiled in senescence, or on drying.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, much thinner above, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 10 mm long, hyaline, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 5.5 mm long, coriaceous, light brown, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma hairs white. Lemma apex acute, awned, 1 -awned. Principal lemma awn bigeniculate or bigeniculate, 22–25 mm long overall, with twisted column. Column of lemma awn hirsute. Palea 2 -veined, without keels.


**Derivation** (Clifford & Bostock 2007): L. -ensus, denoting origin. From San Diego County, California, USA.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 70–100 cm long. Culm-internodes scaberulous, distally pubescent. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 1–2 mm long, truncate or obtuse. Leaf-blades flat or involute, 15–40 cm long, 2–4 mm wide. Leaf-blade surface scabrrous, rough abaxially, pubescent, hairy adaxially. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 9–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–10 mm long, 1.1 length of upper glume, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 8–9 mm long, hyaline, without keels, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, suberete, 6.5–7.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 1–2 mm long. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 20–33 mm long overall, with twisted column. Column of lemma awn scabrrous, glabrous. Palea without keels.


**Type** from India. **Basionym or Replaced Name**: *Stipa duthiei* Hook. f. *Fl. Brit. India* 7(22): 232 (1897) [1896]. T:<Type of Basionym>: *fide TROPICOS and Kew Synonymy Database: India: Garwhal , 12–13,000 ft, Duthie 273 (HT: ?).**

**Illustrations (Books)**: S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 281).

**Derivation** (Clifford & Bostock 2007): in honor of John Firminger Duthie (1845–1922) English botanist who collected in India.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 100–160 cm long. Ligule an eciliate membrane, obtuse. Leaf-blades flat or convolute, 30–45 cm long, 2–3 mm wide. Leaf-blade apex filiform.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, acute.
**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 10–12 mm long, 1 length of upper glume, hyaline, pallid, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 10–12 mm long, hyaline, pallid, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 6–7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15 mm long overall, with twisted column. Column of lemma awn pubescent. Palea 1 length of lemma, 2 -veined, without keels.


**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *editus*, high place. Of high places, that is growing on mountains.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.


**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 10–20 cm long. Primary panicle branches appressed, 5–10 cm long, naked below or bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent (white), acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, hyaline, without keels, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 9 mm long, hyaline, without keels, 3 -veined. Upper glume lateral veins obscure. Upper glume apex attenuate.

**Florets.** Fertile lemma linear, subterete, 5–6 mm long, coriaceous, pallid, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 30–40 mm long overall, with a straight or slightly twisted column. Palea 2 -veined, without keels.


**Distribution (TDWG).** Continent. North America.


**TYPE** from Mexico. *Basionym or Replaced Name:* *Stipa eminiens* Icon. 5: 42, t. 467, f. 1. 1799.

**T:** *Type of Basionym,*: *fide* TROPICOS and Kew Synonomy Database: HT: Nie s.n., Mexico: Mexico: Chalma (MA; IT: US-866118 (fragm.)).


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit:** Perennial, caespitose. Culms erect, slender, 50–120 cm long, wiry. Culm-internodes distally glabrous. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1.5–6 mm long. Leaf-blades flat or involute, 20–35 cm long, 1–2(–3) mm wide. Leaf-blade surface pubescent, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, with lower wider than upper, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–15 mm long, 1.1–1.3 length of upper glume, hyaline, much thinner above, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–12 mm long, 1.5–1.7 length of adjacent fertile lemma, hyaline, much thinner above, without keels, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, suberete, 4.5–7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy all along. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 35–60 mm long overall, with twisted column. Column of lemma awn glabrous. Palea without keels.


2n = 44 (FNA), or 46 (FNA).

**Distribution (TDWG).** Continent: North America.

**Country /Province /State.** South-central USA. Mexico. Arizona, California. New Mexico, Texas. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 10–30 cm long. Culm-internodes solid, antrorsely scabrous. Leaves mostly basal. Leaf-sheaths puberulous. Ligule an eciliate membrane, 0.5–1 mm long, pubescent on abaxial surface, truncate. Leaf-blades involute, 5–10 cm long, 0.5–1 mm wide. Leaf-blade surface scabrous.

**Inflorescence.** Inflorescence a panicle, exerted or embraced at base by subtending leaf. Panicle open, lanceolate, 4–12 cm long, bearing few spikelets. Primary panicle branches appressed, 2–8 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, dorsally compressed, 3.8–6 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 3.5–5.5 mm long, 0.9 length of upper glume, membranous, without keels, 5 -veined. Lower glume apex obtuse. Upper glume oblong, 3.8–6 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, dorsally compressed, 3.8–6 mm long, coriaceous, dark brown, without keel. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn 6–10 mm long overall, deciduous. Palea 1 length of lemma, coriaceous, 2 -veined, without keels.

**Flower and Fruit.** Lodicules 3. Anthers 2 mm long, purple.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Northwest USA: Oregon, Washington.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms 30–60 cm long. Ligule an eciliate membrane, 0.2 mm long. Leaf-blades flat or convolute, 15–30 cm long, 2–4 mm wide. Leaf-blade surface ribbed. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 3.3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.3 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 3.3–3.5 mm long, membranous, without keels, 3 -veined. Upper glume apex obtuse.

**Florets.** Fertile lemma elliptic, subterete, 3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface puberulous. Lemma margins convolute, covering most of palea. Lemma apex
dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, straight, 10 mm long overall, limb puberulous. Palea without keels.

**Flower and Fruit.** Lodicules 2, 0.5–0.75 mm long. Anthers 3, 2 mm long, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central, China North-Central, China Southeast.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths not bulbous. Culms geniculately ascending, 30–60 cm long, wiry, 6–11-noded. Culm-internodes distally hispid, with reflexed hairs. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades straight or curved, 1.5–6 cm long, 1 mm wide. Leaf-blade surface pilose, hairy on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 8–16 cm long, 1–2 cm wide. Primary panicle branches ascending, 2–3-nate, bearing 2–4 fertile spikelets on each lower branch. Panicle axis with lower internodes 1–4.2 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–13 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–10.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.7–1 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–8 mm long, 1.1–1.2 length of upper glume, chartaceous, much thinner on margins, without keels, 3-veined. Lower glume apex acuminate. Upper glume lanceolate, 6–8 mm long, membranous, with hyaline margins, without keels, 3-veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 3.5–5 mm long, coriaceous, light brown, without keel, 5-veined, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma apex surmounted by a ring of hairs, with this appendage 0.7–1 mm long, awned, 1-awned. Principal lemma awn bigeniculate, 29–50 mm long overall, with 11–27 mm long limb, with twisted column. Middle segment of lemma awn 10–13 mm long. Column of lemma awn 8–10 mm long. Palea 3–4 mm long, 2-awned, without keels. Palea surface pilose, hairy on back.

**Flower and Fruit.** Lodicules 2, 1–1.2 mm long, veinless. Anthers 3, 2 mm long, brown. Stigmas 2. Caryopsis fusiform, 3–4 mm long, light brown. Embryo 0.25 length of caryopsis.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Northeast Mexico.


**TYPE** from USA. **Basionym or Replaced Name:** *Stipa hymenoides* Roem. & Schult., *Systema Vegetabilium* 2: 339. 1817. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: T: Bradbury s.n., USA: banks of the Missouri River.


**Images:** R.Darke, *Ornamental Grasses* (2004); R.Darke, *The Encyclopaedia of Grasses for Liveable Landscapes* (2007);


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–70 cm long. Leaves basal and cauline. Ligule an eciliate membrane, 3–7 mm long, entire or lacerate. Leaf-blades filiform, involute, 10–30 cm long, 1–2 mm wide, coriaceous, stiff. Leaf-blade surface ribbed. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, dorsally compressed, 5–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.8 mm long, pilose.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 5–8 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface glabrous or puberulous. Lower glume apex attenuate. Upper glume ovate, 5–8 mm long, 1.6–2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume apex attenuate.

**Florets.** Fertile lemma ovate, dorsally compressed, 3–4 mm long, coriaceous, dark brown to black, without keel, 5 -veined, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma hairs white, 2–4 mm long. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn straight, 3–6 mm long overall, deciduous. Palea coriaceous, 2 -veined, without keels.

**Flower and Fruit.** 2n = 46 (FNA), or 48 (FNA).

**Distribution (TDWG).** Continent: Temperate Asia, North America.


Chihuahua. Baja California Sur.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 284).

**Derivation** (Clifford & Bostock 2007): L. *inaquequalis*, unequal; gluma, husk. Glumes differing in length and/or shape.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–50 cm long, 0.8–1 mm diam., 2–3 -noded. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane, 0.5–1 mm long, scarious, entire or erose, truncate. Leaf-blades filiform, involute, 4–12(–20) cm long, 1–2 mm wide. Leaf-blade surface glabrous or puberulous, hairy adaxially.
**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 7–13 cm long, 1 cm wide. Primary panicle branches ascending, 1.5–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus 0.3 mm long, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 7–8 mm long, 1.1–1.4 length of upper glume, membranous, pallid or light green, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acuminated. Upper glume lanceolate, 5–7 mm long, membranous, pallid or light green, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acuminated.

**Florets.** Fertile lemma lanceolate, subterete, 3–4 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins convergent above. Lemma surface hirsute, hairy above. Lemma margins convolute, covering most of palea. Lemma hairs 3 mm long. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–20 mm long overall, with a straight or slightly twisted column. Column of lemma awn 0.33–0.5 length of limb. Palea 1 length of lemma, 2 -veined, without keels. Palea surface puberulous, hairy on back.

**Flower and Fruit.** Anthers 3, 2–2.5 mm long, anther tip smooth. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central, China North-Central.

Gansu. Sichuan.


Illustrations (Books): S-L Chen et al, *Flora of China, Illustrations, Poaceae* (2007) (Fig. 290).

Derivation (Clifford & Bostock 2007): *L. inebrio*, intoxicate. When grazed by cattle in Mongolia they exhibit symptoms of intoxication.


Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 12–18 cm long. Primary panicle branches 2.5–5 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–4 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminated. Upper glume lanceolate, 5 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminated.

Florets. Fertile lemma lanceolate, subterete, 3 mm long, coriaceous, dark brown, without keel, 3 -veined, 0–3 -veined. Lemma surface pilose, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma apex pubescent, awned, 1 -awned. Principal lemma awn geniculate, 10 mm long overall, with twisted column. Column of lemma awn puberulous. Palea 1 -veined, without keels.


Country /Province /State. China and Mongolia. China South Central, Inner Mongolia, China North-Central, Qinghai, Tibet, Xinjiang. Mongolia.

Achnatherum jacquemontii (Jaubert & Spach) P.C. Kuo & S. L. Lu.


Basionym or Replaced Name: Stipa jacquemontii Jaub. & Spach, Illustr. 4: 60. (1851).

Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 281).


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 30–90 cm long. Ligule an eciliate membrane, 0.2–0.4 mm long. Leaf-blades filiform, involute, 10–20 cm long, 1–2 mm wide, stiff, glaucous. Leaf-blade surface puberulous, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 6–16 cm long, 2 cm wide. Primary panicle branches ascending, 2–3 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper spikelet. Spikelets lanceolate, subterete, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3–0.4 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate or elliptic, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate or elliptic, 5–7 mm long, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma elliptic, subterete, 4.3–5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn bigeniculate, 35 mm long overall, with twisted column. Column of lemma awn 15 mm long, puberulous. Palea 2 -veined, without keels.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets lanceolate, subterete, 13–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, purple, without keels, 3 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 25–40 mm long, membranous, purple, without keels, 3 -veined. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 8–9 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 35–45 mm long overall, with twisted column. Column of lemma awn ciliate. Palea 2 -veined, without keels.


$2n = 70$ (FNA).

**Distribution (TDWG).** Continent. North America.

Country /Province /State. Southwestern USA. California.

### Achnatherum lemmornii


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 10–70 cm long. Culm-internodes scaberulous. Leaf-sheaths glabrous on surface to hirsute. Ligule an eciliate membrane, 1–2.2 mm long, entire or erose, obtuse. Leaf-blades involute, 10–20 cm long, 1.5–2.5 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–12 mm long, hyaline, without keels, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 5–7.5 mm long, 1.2 mm wide, coriaceous, light brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex emarginate, awned, 1 -awned. Principal lemma awn bigeniculate, 18–29 mm long overall, with twisted column, limb limb glabrous or puberulous. Middle segment of lemma awn pubescent. Column of lemma awn pubescent, with 0.5 mm long hairs. Palea 0.66 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Lodicules 3, 1.5 mm long. Anthers 3, 3–3.5 mm long, purple. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp. Hilum linear.

$2n = 34$ (FNA).

**Distribution (TDWG).** Continent. North America.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms 20–60 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.3–0.8 mm long, truncate. Collar glabrous. Leaf-blades filiform, involute, 1–1.5 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–1 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 6–9 mm long, hyaline, without keels, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 4.5–6 mm long, 1 mm wide, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 1 -awned. Principal lemma awn bigeniculate, 15–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 3.5 mm long, 0.66–0.75 length of lemma, 2 -veined, without keels. Palea surface pubescent.

**Flower and Fruit.** Lodicules 2, 1.5 mm long. Anthers 3, 2.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp. Hilum linear.

2n = 32 (FNA).

**Distribution (TDWG).** **Continent.** North America.

**Country /Province /State.** Northwest USA, Southwestern USA, South-central USA. Colorado, Idaho, Montana, Oregon, Washington, Wyoming, Arizona, California, Nevada, Utah. New Mexico, Texas.


Stipa robusta (Vasey) Scribn.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 40–100 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.2–0.5 mm long. Leaf-blades flat or conduplicate, 25–50 cm long, 1–4 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–15 mm long, 1.2–1.3 length of upper glume, hyaline, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–12 mm long, 1–1.5 length of adjacent fertile lemma, hyaline, without keels, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 7–8 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy all along. Lemma margins convolute, covering most of palea. Lemma hairs 1.5–2 mm long. Lemma apex dentate, 2 -fid, with lobes 0.7–1.5 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate or bigeniculate, 10–20 mm long overall, with a straight or slightly twisted column. Column of lemma awn hispidulous. Palea without keels.


**Distribution (TDWG).** Continent. North America.
Country /Province /State. Southwestern USA, South-central USA. Arizona. New Mexico, Texas.


Accepted by: W.D. Clayton & K. Harman, GrassBase (2008) and online (as *Stipa*).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to. From Mongolia.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 4.5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.2–0.8 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, subequal in width, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, hyaline, pallid or purple. Lower glume apex acute. Upper glume lanceolate, 4.5–6.5 mm long, hyaline, pallid or purple, without keels. Upper glume apex acute.

**Florets.** Fertile lemma linear to lanceolate, subterete, 3.3–5.3 mm long, coriaceous, dark brown, without keel, 3 -veined, 0–3 -veined. Lemma surface puberulous, hairy below, hairy on veins. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 15–30 mm long overall, with twisted column, limb plumose. Middle segment of lemma awn plumose. Column of lemma awn plumose. Palea 2 -veined, without keels.


2n = 22 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Illustrations:** None found.


**Classification.** Subfamily Pooidae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 60–100 cm long, wiry, 4–6 -noded. Culm-internodes distally glabrous. Lateral branches sparse, arising from mid culm. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades flat or involute, 10–30 cm long, 1–3 mm wide, stiff. Leaf-blade surface scabrous.

**Inflorescence.** Inflorescence a panicle. Primary panicle branches appressed or ascending, distant, 2–6 cm long. Panicle branches stiff. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent (tawny), acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, hyaline, pallid, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 25–40 mm long, hyaline, pallid, without keels, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 5 mm long, coriaceous, pallid, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white or tawny. Lemma apex awned, 1 -awned. Principal lemma aawn bigeniculate, 25–30 mm long overall, with twisted column. Palea 2 -veined, without keels.


**Distribution (TDWG). Continent.** North America.

**Country /Province /State.** Mexico. Northeast Mexico.

**Chihuahua, Zacatecas.**

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**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 289).


**Classification.** Subfamily Pooidae. Tribe: Stipeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile floret or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate or oblong, 5.5 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface puberulous. Lower glume apex acute. Upper glume lanceolate, 6.5 mm long, membranous, 1-keeled, 3 -veined. Upper glume surface puberulous. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong or ovate, subterete, 5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 12 mm long overall, with twisted column. Palea lanceolate, 4 mm long, 0 -veined, without keels. Palea surface puberulous.

**Flower and Fruit.** Anthers 3, 4 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.


Hebei, Shanxi.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 60–100 cm long. Culm-internodes distally pubescent. Leaf-sheaths pubescent. Ligule an eciliate membrane. Leaf-blades flat or involute, 10–20 cm long, 1–5 mm wide. Leaf-blade surface pubescent.


**Fertile Spikelets.** Spikelets comprising 1 fertile floret or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, membranous, without keels. Lower glume apex acuminate. Upper glume lanceolate, hyaline, without keels. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 30–50 mm long overall, with twisted column.

**Flower and Fruit.** $2n = 36$ (FNA), or 44 (FNA).

**Distribution (TDWG).** Continent. North America.


**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Nevada, USA.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial (tufted), caespitose, clumped densely. Culms 40–90 cm long. Culm-internodes antrorsely scabrous, distally glabrous. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades filiform, flat or involute, 10–25 cm long, 1–3 mm wide. Leaf-blade surface puberulous (above).


**Fertile Spikelets.** Spikelets comprising 7–10 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–10 mm long, 1 length of upper glume, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–10 mm long, hyaline, without keels, 3 -veined. Upper glume apex acuminate.

**Florrets.** Fertile lemma lanceolate, subterete, 5–6.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma hairs 1.5 mm long. Lemma apex acute, awned, 1 -awned. Principal lemma awn bigeniculate, 20–35 mm long overall, with twisted column, limb plumose (first and second segment), with 0.5–1.5 mm long hairs. Column of lemma awn glabrous. Palea 0.5 length of lemma, 2 -veined, without keels. Palea surface pubescent.


2n = 68 (FNA).

**Distribution (TDWG).** Continent: North America.

**Country /Province /State.** Northwestern USA, Southwestern USA. Oregon, Washington, Arizona, California, Nevada, Utah.


**Derivation** (Clifford & Bostock 2007): L. occident, west; -ale, pertaining to. From the western states of the United States.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms 80–120 cm long. Culm-internodes distally glabrous or pubescent. Leaf-sheaths glabrous on surface to pubescent. Ligule an
eciliate membrane, 0.5–1 mm long, entire or erose, truncate. Leaf-blades filiform or linear, flat or involute, 10–20 cm long, 1–5 mm wide. Leaf-blade surface glabrous or puberulous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 7–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1–1.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–15 mm long, hyaline, without keels, 3–7 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 5–8 mm long, coriaceous, light brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 0.5–1.5 mm long. Lemma apex acute, awned, 1 -awned. Principal lemma awn bigeniculate, 15–50 mm long overall, with twisted column. Middle segment of lemma awn glabrous or hirtellous. Column of lemma awn glabrous or hirtellous, with 1 mm long hairs. Palea 2–3.5 mm long, 0.33–0.5 length of lemma, 2 -veined, without keels. Palea surface pubescent.

**Flower and Fruit.** Lodicles 3, 1.5 mm long. Anthers 3, 2.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp. Hilum linear. 2n = 36 (FNA).


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*).


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 30–60 cm long. Ligule an eciliate membrane. Leaf-blades flat or convolute, 10–20 cm long, 0.5–2 mm wide. Leaf-blade surface ribbed, grooved abaxially, scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 4.2–5.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels. Lower glume surface smooth, glabrous. Lower glume apex acute or acuminate. Upper glume elliptic, 4.2–6.5 mm long, membranous, without keels. Upper glume surface smooth, glabrous. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma elliptic, 2.3–3.2 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn curved, 11–15 mm long overall, with a straight or slightly twisted column, deciduous. Column of lemma awn 3–5 mm long. Palea 2 -veined, without keels.

**Flower and Fruit.** Anthers 3. Stigmas 2.


Country /Province /State. Caucasus. Transcaucasia.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–45 cm long. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blades conduplicate or involute, 7–15 cm long, stiff.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 12–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–14 mm long, 1.1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 10–12 mm long, hyaline, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma lanceolate, suberete, 6–8 mm long, coriaceous, light brown, without keel, 5 -veined, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 1 -awned. Principal lemma awn bigeniculate, 18 mm long overall, with twisted column.


Coahuila, Neuvo Leon.


Illustrations (Books): T. Koyama, Grasses of Japan and its neighbouring regions (1987) (208, Fig 74), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 291).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Pekin, now Beijing, China.


Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Butt sheaths persistent and investing base of culm. Culms erect, 70–150 cm long, 2.5–4 mm diam., 3–4 -noded. Leaf-sheaths loose. Ligule an eciliate membrane, 0.5–1 mm long, erose, truncate. Leaf-blades involute, 30–60 cm long, 7–15 mm wide, stiff. Leaf-blade surface scabrous, rough adaxially, glabrous or pubescent, hairy adaxially. Leaf-blade margins scabrous.
Inflorescence. Inflorescence a panicle. Panicle open, elliptic or ovate, loose or effuse, 15–40 cm long, 2–4 cm wide. Primary panicle branches 2–6 -nate, 4–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 8–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long. pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface glabrous to pubescent. Lower glume apex acute. Upper glume lanceolate, 8–11 mm long, membranous, without keels, 3 -veined. Upper glume surface glabrous to pubescent. Upper glume apex obtuse or acute.

Florets. Fertile lemma lanceolate, suberete, 6–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins convergent above. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 20–25 mm long overall, with twisted column. Palea 5 mm long, 2 -veined, without keels. Palea surface pubescent, hairy on back.

Flower and Fruit. Anthers 3, 4–6 mm long, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, 4–5 mm long. Hilum linear. $2n=24$ (1 ref TROPICOS).


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 279 as Ptilagrostis).


Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly. Culms erect, 25–30 cm long. Culm-internodes channelled, distally glabrous. Leaf-sheaths 1–6 cm long. Ligule a fringe of hairs or absent. Leaf-blades filiform, involute, 3–10 cm long, 1 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret.


**Derivation** (Clifford & Bostock 2007): L. possessing the characters of two related species.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations intravaginal. Culms erect, 30–70 cm long. Culm-internodes smooth or scaberulous, distally glabrous. Leaf-sheaths longer than adjacent culm internode, smooth or scaberulous, glabrous on surface, outer margin glabrous or hairy. Ligule a ciliolate membrane, 0.3–0.8 mm long. Leaf-blade 1–3 mm wide. Leaf-blade surface scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 6–20 cm long, 1–2 cm wide. Primary panicle branches ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 9–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–0.85 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–14 mm long, 1.2–1.4 length of adjacent fertile lemma, hyaline, without keels, 3–5 -veined. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume lanceolate, 7.5–10 mm long, 1.5–1.7 length of adjacent fertile lemma, hyaline, without keels, 3–5 -veined. Upper glume surface scabrous. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, suberete, 4.5–6.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy all along. Lemma margins convolute, covering most of palea. Lemma hairs 0.5–1.8 mm long. Lemma apex dentate, 2 -fid, with lobes 0.15–0.45 mm long, awned. 1 -awned. Principal lemma awn from a sinus, geniculate, 10–20 mm long overall, with a straight or slightly twisted column. Palea 2.5–3.75 mm long, without keels.

**Flower and Fruit.** Anthers 3, 2.25–4.2 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** **Continent.** North America.

**Country /Province /State.** **Northwest USA, South-central USA, Colorado. Arizona, Utah. New Mexico.**


**Stipa setacea.**

**Illustrations (Books):** T.D. Stanley & E. Ross, *Flora of South East Queensland, Gramineae* (1989) (105, Fig. 17 as *Stipa setacea*).

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial. Basal innovations extravaginal. Culms erect, 30–60 cm long, wiry. Culm-internodes smooth. Culm-nodes purple, glabrous. Lateral branches lacking or sparse. Leaf-sheaths 1–3 cm long, glabrous on surface or pubescent, with reflexed hairs. Leaf-sheath oral hairs lacking or pubescent. Leaf-sheath auricles erect, 0.5–1 mm long. Ligule an eciliate membrane, 0.3–0.5 mm long. Leaf-blades aciculate, involute, 15–30 cm long, 0.8 mm wide, stiff. Leaf-blade surface pubescent, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.1–0.3 mm long, pilose, disarticulating obliquely. Floret callus hairs 1 mm long.


**Florets.** Fertile lemma linear, subterete, 3–5 mm long, coriaceous, without keel, 3–5 -veined or more than 3-veined. Lemma surface pubescent. Lemma margins involute, interlocking with palea keels. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 30–40 mm long overall, with a straight or slightly twisted column. Column of lemma awn 5–10 mm long, puberulous. Palea 1 length of lemma, 2 -veined. Palea keels contiguous above a sulcus. Palea surface pilose, hairy on back, hairy above.

**Flower and Fruit.** Lodicules 3, 0.5–1 mm long. Anthers 3, 1.7 mm long, eventually exserted, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 2.5–3.5 mm long. Hilum linear. Cleistogenes absent.

**Distribution (TDWG).** Continent Australasia. Country /Province /State. New Zealand. New Zealand South I.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.
acuminate. Upper glume linear, 10 mm long, hyaline, without keels, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 6–7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma hairs 1.5–2 mm long. Lemma apex dentate, 2 -fid, with lobes 1–1.5 mm long, acute, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 0.8 length of lemma, 2 -awned, without keels. Palea surface villous.

**Flower and Fruit.** Lodicules 3, 1.5 mm long. Anthers 3, 2 mm long, purple. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp. Hilum linear.

2n = 32 (FNA).

**Distribution (TDWG).** Continent. North America.
**Country /Province /State.** Northwest USA, Southwestern USA. Idaho, Wyoming, Arizona, California, Nevada, Utah.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect, 40–60 cm long, 1–1.5 mm diam., 2–3 -noded. Leaf-sheaths mostly shorter than adjacent culm internode, smooth. Ligule an eciliate membrane, 0.5 mm long, scarious, entire or erose, truncate. Leaf-blades filiform, involute, 8–12 cm long, 1–1.5 mm wide. Leaf-blade surface scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 5–12 cm long, 1 cm wide. Primary panicle branches ascending, 1–2.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus 0.3 mm long, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 6 mm long, 0.9 length of upper glume, membranous, purple, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 6 mm long, membranous, purple, 1-keeled, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 4 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins meeting above. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 2 -veined, without keels. Palea surface pubescent, hairy on back.

**Flower and Fruit.** Anthers 3, 2 mm long, anther tip smooth. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.
**Country /Province /State.** China. China South Central, China North-Central, Qinghai, Gansu. Sichuan.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 288).
Derivation (Clifford & Bostock 2007): L. pubes, hair of adulthood; Gk kalyx, cup. Glumes hairy.


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Cataphylls evident. Culms erect, 60–100 cm long, 3–4 -noded. Leaf-sheaths longer than adjacent culm internode, antrorsely scabrous. Ligule an eciliate membrane, 1 mm long, truncate. Leaf-blades 20–40 cm long, 3–5 mm wide. Leaf-blade surface scabrous, rough abaxially, pubescent, densely hairy, hairy adaxially. Leaf-blade apex acuminate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.8 mm long, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface puberulous. Lower glume apex obtuse or acute. Upper glume lanceolate, 8–9 mm long, membranous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex obtuse or acute.


Flower and Fruit. Anthers 3, 4–5 mm long. anther tip penicillate. Stigmas 2.


TYPE from Canada. Basionym or Replaced Name: Stipa richardsonii Link, Hort. Berol. 2 : 245. (1833). T: <Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Cultivated in Hortus Berolensis from seed sent by Richardson (B (destroyed); IT: LE-TRIN-1436.01 (fragm. ex B)).


Habit, Vegetative Morphology. Perennial, caespitose. Culms 40–100 cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades conduplicate or involute, 15–25 cm long, 1.5–3 mm wide. Leaf-blade surface scaberulous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–10 mm long, 1.3 length of upper glume, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 6–7.5 mm long, hyaline, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 5–6 mm long, coriaceous, light brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 1 -awned. Principal lemma awn bigeniculate, 18–25 mm long overall, with
twisted column. Middle segment of lemma awn pubescent. Column of lemma awn hirtellous. Palea 0.5 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Lodicules 2, 1.5 mm long. Anthers 3, 2 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp. Hilum linear.

2n = 44 (FNA).

**Distribution (TDWG).** Continent. North America.


**Derivation** (Clifford & Bostock 2007): L. robust. Culms tall, or leaf-blades or spikelets large.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, robust, 100–150 cm long, 3–6 mm diam. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.5–4 mm long. Collar pubescent. Leaf-blades flat or involute, 30–50 cm long, 5–8 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–13 mm long, 1 length of upper glume, hyaline, without keels, 3–5 -veined. Lower glume apex attenuate. Upper glume lanceolate, 8–13 mm long, 1.3–1.6 length of adjacent fertile lemma, hyaline, without keels, 3–5 -veined. Upper glume apex attenuate.

**Florets.** Fertile lemma linear, subterete, 6–8 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma hairs 1–2 mm long. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 20–38 mm long overall, with 12–18 mm long limb, with twisted column. Column of lemma glabrous or puberulous. Palea without keels.


2n = 64 (FNA).

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Northwest USA, Southwestern USA, South-central USA, Mexico. Wyoming, Arizona, California. New Mexico. Northeast Mexico.

Coahuila, Chihuahua, Neuvo Leon, Tamaulipas, Zacatecas.


**TYPE** from Russia, Caucasus.

**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 258).


Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls inconspicuous. Rhizomes short. Culms erect, 20–60 cm long. Culm-internodes distally glabrous. Leaves basal and cauline. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule an eciliate membrane, 0.2–0.7 mm long on basal shoots. Leaf-blades filiform, flat or convoluted, 1–2.5 mm wide. Leaf-blade surface scabrous, rough adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 4–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, obtuse.


Florets. Fertile lemma elliptic, subterete, 2.6–3.5 mm long, coriaceous, without keel, 3 -veined, 0–3 - veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 2.5–4 mm long overall, without a column, deciduous. Palea 2 -veined, without keels. Palea surface pubescent.


Country /Province /State. Middle Asia, China, Mongolia. Kazakhstan, Kirgizistan, Uzbekistan. Inner Mongolia, China North-Central, Qinghai, Xinjiang. Mongolia.

Gansu.


Habit, Vegetative Morphology. Perennial. Culms erect, 30–70 cm long. Culm-internodes distally glabrous or pubescent. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate
membrane, 0.5–1 mm long. Leaf-blades flat, 15–25 cm long, 2–4 mm wide. Leaf-blade surface scaberulous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent (tawny), acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, pallid, without keels, 3 -veined. Lower glume surface asperulous. Lower glume apex attenuate. Upper glume lanceolate, 10–15 mm long, membranous, pallid, without keels, 3 -veined. Upper glume surface asperulous. Upper glume apex attenuate.

**Florets.** Fertile lemma lanceolate, subterete, 8 mm long, coriaceous, pallid, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent or pilose (longer above). Lemma margins convolute, covering most of palea. Lemma hairs white, 1–2 mm long. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 14–20 mm long overall, with twisted column. Middle segment of lemma awn 3–5 mm long. Column of lemma awn 3–5 mm long, glabrous. Palea 2 -veined, without keels.


\(2n = 40\) (FNA).

**Distribution (TDWG).** Continent. North America.


**TYPE** from Russia. Basinonym or Replaced Name: *Stipa sibirica* (L.) Lam., *Illustr.* i. 158. (1791).


**Illustrations (Books):** S-L Chen et al, *Flora of China,* Illustrations, Poaceae (2007) (Fig. 287).


Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Rhizomes short. Culms 60–150 cm long. Ligule an eciliate membrane, 0.4–0.9 mm long. Leaf-blades flat, 20–40 cm long, 3.5–8(–12) mm wide. Leaf-blade surface scaberulous or scabrous, rough on both sides, puberulous, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, nodding, 10–40 cm long. Spikelets solitary, Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7.5–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident or elongated, 0.5–1 mm long, pubescent, obtuse or acute or pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate or elliptic, 1 length of upper glume, membranous, pallid or mid-green, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate or elliptic, 7.5–10 mm long, 1.2 length of adjacent fertile lemma, membranous, pallid or mid-green, without keels, 3 -veined. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, subterete, 6–8 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent, hairy all along. Lemma margins convolute, covering most of palea. Lemma apex surmounted by a ring of hairs, awned, 1 -awned. Principal lemma awn bigeniculate, 13–20 mm long overall, with twisted column. Column of lemma awn puberulous, with 0.2 mm long hairs. Palea 2 -veined, without keels.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms robust, 50–250 cm long. Ligule an eciliate membrane, 2.5–10 mm long. Leaf-blades flat or involute, 20–45 cm long, 4–10 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, dense or loose, 15–50 cm long, 10–35 cm wide. Primary panicle branches whorled at most nodes. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 4–4.5 mm long, 0.7–0.8 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 5–6 mm long, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma elliptic, subterete, 4.8–5.7 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 0.5–1.3 mm long, awned, 1 -awned. Principal lemma awn straight or geniculate, 6–12 mm long overall, with a straight or slightly twisted column. Palea 2 -veined, without keels.


2n = 42 (FNA), or 48 (FNA).


Region. Eastern Europe.

Country /Province /State. Central European Russia, East European Russia, North European Russia, South European Russia. Siberia, Middle Asia, Western Asia, China, Mongolia, Russia. Buryatiya, Chita, Irkutsk, Tuva. Kazakhstan, Kirgizistan, Turkmenistan, Tadzhikistan, Uzbekistan, Afghanistan, Iran. Inner Mongolia, Manchuria, China North-Central, Qinghai, China Southeast, Tibet, Xinjiang. Mongolia. Indian Subcontinent. India, Pakistan.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 70–100 cm long, 4–5 -noded. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs. Leaf-blades 15–30 cm long, 3–6 mm wide. Leaf-blade surface ribbed, scabrous, rough adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 15–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pilose, obtuse.


Florets. Fertile lemma lanceolate, suberete, 8 mm long, coriaceous, pallid, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex lobed, 2 -fid, with lobes 2–3 mm long, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 25–30 mm long overall, with twisted column. Palea without keels.


Country/Province/State. Northwestern USA. California.


Flower and Fruit. 2n = 34 (FNA).


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 30–70 cm long. Culm-nodes pubescent. Leaf-sheaths glabrous on surface to hirsute. Ligule an eciliate membrane, 2–5 mm long, scaberulous on abaxial surface, lacerate, truncate or acute. Leaf-blades filiform, involute, 10–15 cm long. 1–2.2 mm wide. Leaf-blade surface scabrous, rough abaxially, pilose, sparsely hairy, hairy adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1–1.5 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, much thinner above, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 9–14 mm long, hyaline, much thinner above, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 7–9 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy all along. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 1 -awned. Principal lemma awn bigeniculate, 40–50 mm long overall, with twisted column. Middle segment of lemma awn 10 mm long, hirsute. Column of lemma awn 10 mm long, hirsute, with 1–2 mm long hairs. Palea 2 -veined, without keels.


2n = 34 (FNA).


Recent Synonyms: Oryzopsis wallowensis (Maze & Robson) FORSAN.


Derivation (Clifford & Bostock 2007): L. ense, denoting origin. From Wallawa Mountains, Oregon, USA.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 10–45 cm long. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane. Leaf-blades erect, involute, 5–10 cm long, 0.5–1 mm wide. Leaf-blade surface pubescent, hairly adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, dorsally compressed, 3.5–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 3.5–7 mm long, 1.1 length of upper glume, membranous, without keels. Lower glume apex obtuse or acute. Upper glume oblong, 3–6.5 mm long, 1 length of adjacent fertile lemma, membranous, without keels. Upper glume apex obtuse or acute.

**Florets.** Fertile lemma oblong, dorsally compressed, 3–3.5 mm long, 1–1.5 mm wide, coriaceous, dark brown or black, without keel. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn 8–11 mm long overall, deciduous. Palea 1 length of lemma.

**Flower and Fruit.** Lodicules 3. Anthers 2 mm long, pallid.

**Distribution (TDWG).** Continent. North America.

**Country/Province/State.** Northwest USA. Idaho, Oregon.


**Type** from USA. **Basionym or Replaced Name:** *Eriocoma webberi* Thurb., *S. Wats. Bot. Calif.* 2: 283 (1880). **T:**<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: T: Bolander s.n., USA: California: Sierra Valley.


**Derivation** (Clifford & Bostock 2007): in honor of David Gould Webber (1809-) United States physician, miner and miller.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 10–30 cm long. Culm-internodes solid. Leaves mostly basal. Ligule an eciliate membrane, 0.3–0.5 mm long, glabrous on abaxial surface. Leaf-blades elliptic, involute, 5–10 cm long, 0.5 mm wide. Leaf-blade surface scabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, subterete, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus 0.3 mm long, bearded, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–9 mm long, 1 length of upper glume, membranous, without keels, 5 -veined. Lower glume lateral veins obscure. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 7–9 mm long, 1.2 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume lateral veins obscure. Upper glume surface asperulous. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 6–7 mm long, coriaceous, without keel. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 0.5–1 mm long, awned, 1 -awned. Principal lemma awn from a sinus, straight or curved, 5–8 mm long overall, deciduous. Palea coriaceous, 2 -veined, without keels.

**Flower and Fruit.** Lodicules 3. Anthers 1.5 mm long. 2n = 32 (FNA).


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Distribution (TDWG).** Continent: North America.

**Country /Province /State.** Southwestern USA. California.


**Accepted by:** R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online.


**Derivation** (Clifford & Bostock 2007): L, dropping off early. Florets or spikelets shed shortly after anthesis.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Distribution (TDWG).** Continent: North America.

**Country /Province /State.** Northwest USA. Montana, Wyoming.


**Derivation** (Clifford & Bostock 2007): L. acus, needle; -ulus, diminutive; -are, pertaining to. Leaf-blades sharp-pointed.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, cushion forming. Culms 1–3 cm long. Lateral branches ample. Ligule an eciliate membrane, 0.7 mm long. Leaf-blades aciculate, conduplicate, 0.4–1 cm long, 0.3–0.4 mm wide, stiff. Leaf-blade venation comprising 3 vascular bundles, with 3 secondary veins. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex acute, pungent.

**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets, shorter than basal leaves. Spikelets solitary.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 4–4.6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous, truncate.

**Glumes.** Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume ovate, 1.8–2.2 mm long, 1 length of upper glume, coriaceous, without keels, 3–5 -veined. Lower
glume apex obtuse. Upper glume ovate, 1.8–2.2 mm long, 0.5 length of adjacent fertile lemma, coriaceous, without keels, 3–5 -veined. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, subterete, 4–4.6 mm long, coriaceous, shiny, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex rostrate. Palea coriaceous, 2 -veined, without keels.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica, Northern South America, Western South America. Costa Rica. Venezuela. Bolivia, Colombia, Ecuador, Peru.

**Catamarca.**


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, cushion forming. Culms 1–3 cm long. Lateral branches ample. Ligule an eciliate membrane, 0.7 mm long. Leaf-blades erect or ascending, aciculate, conduplicate, 0.4–1 cm long, 0.3–0.4 mm wide, stiff. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex acute, pungent, filiform (1–1.5mm, flexuous), hairy.

**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets, shorter than basal leaves. Spikelets solitary.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 4–4.6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous, truncate.

**Glumes.** Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume ovate, 1.8–2.2 mm long, 1 length of upper glume, coriaceous, without keels, 3–5 -veined. Lower glume apex obtuse. Upper glume ovate, 1.8–2.2 mm long, 0.5 length of adjacent fertile lemma, coriaceous, without keels, 3–5 -veined. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, subterete, 4–4.6 mm long, coriaceous, shiny, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex rostrate. Palea coriaceous, 2 -veined, without keels.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia, Ecuador.


**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (95, Fig. 19), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (199, Fig. 57), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (23, Fig. 1).

**Illustrations (Journals):** *Hooker's Icones Plantarum* (t.1362 (1881)), *Ruizia* (13:85, Fig.9e-f (1993)).

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, cushion forming. Culms 1–3 cm long. Leaf-sheaths longer than adjacent culm internode. Ligule an eciliate membrane, 0.7 mm long. Leaf-blades aciculate, conduplicate, 0.4–1 cm long, stiff. Leaf-blade venation comprising 3 vascular bundles, with continuous uniform subepidermal sclerenchyma layer on the underside. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex acute, pungent.

**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1(–3) fertile spikelets, shorter than basal leaves. Spikelets solitary.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus truncate.

**Glumes.** Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume oblong, 1.5 mm long, 1 length of upper glume, coriaceous, without keels, 3–5 -veined. Lower glume apex obtuse. Upper glume oblong, 1.5 mm long, 0.5 length of adjacent fertile lemma, coriaceous, without keels, 3–5 -veined. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, lanceolate in profile, 3 mm long, coriaceous, shiny, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex rostrate. Palea coriaceous, 2 -veined, without keels. Palea apex emarginate.

**Flower and Fruit.** Lodicules 3, membranous, veinless. Anthers 3. $2n = 22$ (1 ref TROPICOS).

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica, Northern South America, Western South America, Southern South America. Costa Rica. Venezuela. Bolivia, Colombia, Ecuador, Peru. Argentina Northwest.


**Illustrations:** None found.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Inflorescence composed of racemes or comprising only a few spikelets. Racemes 1, single, bearing few fertile spikelets, bearing 2–3 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 20–40 mm long, glabrous.

**Fertile Spikelets.** Spikelets comprising 5–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear or oblong, laterally compressed, 25–35 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3–4 mm long.

**Glumes.** Glumes several, 4 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, 5 mm long, chartaceous, without keels. Lower glume apex acute. Upper glume ovate, 11 mm long, chartaceous, without keels. Upper glume apex acute, mucronate.
**Florets.** Fertile lemma ovate, 12 mm long, chartaceous, without keel, more than 3-veined. Lemma surface glabrous. Lemma apex acuminate. Palea 10 mm long. Palea keels ciliolate. Palea apex pubescent. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicles 3, ciliate. Anthers 6, 3 mm long. Stigmas 3. Caryopsis with adherent pericarp, apex unappendaged.

**Distribution (TDWG).** Continent. Temperate Asia.


**TYPE** from Vietnam. **Basionym or Replaced Name:** *Arundinaria brilletii*. T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: Indochina, Tonkin, Yen-lap: Brillet 90.

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of F. Brillet, French botanist who collected in Tonkin.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Inflorescence a panicle. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 5–40 mm long.

**Fertile Spikelets.** Spikelets comprising 10–17 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 40–100 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5–6 mm long, pubescent, hairy at tip.

**Glumes.** Glumes several, 3 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, 5 mm long, chartaceous, without keels, 7–9 -veined. Lower glume margins ciliolate. Lower glume apex acute, mucronate. Upper glume lanceolate or ovate, 12 mm long, chartaceous, without keels, 11–13 -veined. Upper glume margins ciliolate. Upper glume apex acute, mucronate.

**Florets.** Fertile lemma oblong or ovate, 15–18 mm long, chartaceous, without keel, 15–19 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma apex obtuse, mucronate. Palea 11–14 mm long, 2 -veined. Palea keels scaberulous. Palea apex obtuse. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. Tropical Asia.


**TYPE** from China. **Basionym or Replaced Name:** *Acidosasa glauca*. T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: China, Jianou: Chang & Hua 81607 (ZJFI holo).


**Illustrations (Books):** S-L Chen et al, *Flora of China* 22 (Poaceae) (2006) (Fig. 141).

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Jianou, Fujian Province, China.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 140).


Inflorescence. Inflorescence composed of racemes or comprising only a few spikelets. Racemes 1, single, bearing few fertile spikelets, bearing 2–5 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 15–40 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 3–18 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 30–100 mm long, 3–6 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhaclhilla internodes 6–7 mm long, glabrous.

Glumes. Glumes several, 4 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, 3 mm long, chartaceous, without keels, 3 -veined. Lower glume surface glabrous. Lower glume apex acute. Upper glume ovate, 16 mm long, chartaceous, without keels. Upper glume apex acute, mucronate.

**Flower and Fruit.** Lodicules 3, 5–6 mm long, glabrous. Anthers 6, 5 mm long, yellow. Stigmas 3. Caryopsis with adherent pericarp, apex unappendaged.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** China. China Southeast. Guangdong.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** China. Hainan.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** China. China Southeast. Fujian, Jiangxi, Zhejiang.


**TYPE** from China. **Basionym or Replaced Name:** *fide* TROPICOS and Kew Synonomy Database: China, Nanning: Dai & Fuang 8312 (GXFI holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Guangxi Province, China.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 200–300 cm long, 10–20 mm diam., woody. Culm-internodes terete, thin-walled, 16–18 cm long, distally glabrous or pilose. Lateral branches dendroid. Branch complement three. Culm-sheaths present, deciduous, hispid, hairy on margins, auriculate, with 4–5 mm high auricles, with 1 mm wide auricles, setose on shoulders, shoulders with 6–12 mm long hairs. Culm-sheath ligule 2 mm high, ciliolate. Culm-sheath blade lanceolate or triangular, scabrid. Leaves 4–8 per branch. Leaf-sheaths glabrous
on surface. Leaf-sheath oral hairs setose, spreading, 4–5 mm long. Ligule an eciliate membrane, 2 mm long, pubescent on abaxial surface. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 10–16 cm long, 15–23 mm wide. Leaf-blade venation with 8–10 secondary veins. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence composed of racemes or comprising only a few spikelets. Racemes 1, single, bearing few fertile spikelets, bearing 3–6 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicellated. Pedicels present, 15–30 mm long, glabrous or pubescent, hairy above.

**Fertile Spikelets.** Spikelets comprising 13–33 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 60–170 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, 8–10 mm long, chartaceous, without keels. Lower glume surface glabrous or puberulous. Lower glume apex acute. Upper glume ovate, 9–13 mm long, chartaceous, without keels. Upper glume surface glabrous or puberulous. Upper glume apex acute, mucronate.

**Florets.** Fertile lemma ovate, 13–15 mm long, 6–7 mm wide, chartaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins ciliate. Lemma apex acuminate. Palea 10–12 mm long. Palea keels ciliate. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 2 mm long, ciliate. Anthers (4–)6, 5 mm long. Stigmas 3. Ovary glabrous. Caryopsis with adherent pericarp, apex unappendaged.


**Illustrations (Books):** G.Hegi, *Flora von Mitteleuropa* 1 (1909) (Fig. 192).

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Synflorescence bractiferous, scanty, lax, with glaucescent subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets.

Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 8–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 80–110 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 4–5 mm long.

**Glumes.** Glumes several, persistent, similar, shorter than spikelet.

**Florets.** Fertile lemma oblong, 10 mm long, 5 mm wide, chartaceous, without keel, 9–11 -veined, more than 3-veined. Palea keels ciliate. Palea apex obtuse. Apical sterile florets resembling fertile though underdeveloped.
**Flower and Fruit.** Lodicules 3. Anthers 6, 5 mm long. Stigmas 3. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China Southeast. Guangxi.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 139).

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to. From Nanun, Hunan Province, China.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Inflorescence a panicle, comprising 6–8 fertile spikelets. Panicle open, ovate, 18–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 10–25 mm long, glabrous.

**Fertile Spikelets.** Spikelets comprising 7–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 30–70 mm long, 3–5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 6–7 mm long, pubescent.

**Glumes.** Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acute. Upper glume lanceolate, chartaceous, without keels. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 15–17 mm long, 9 mm wide, chartaceous, without keel, 13–18 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acuminate. Palea 12–15 mm long. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 2.5–3 mm long, glabrous. Anthers 6, 5–5.5 mm long. Stigmas 3. Caryopsis with adherent pericarp, apex unappendaged.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central, China Southeast. Guangdong, Hunan, Jiangxi, Zhejiang, Sichuan.


*Pleioblastus maculosoides*.


Inflorescence. Inflorescence composed of racemes or comprising only a few spikelets. Racemes 1, single, bearing few fertile spikelets, bearing 3–5 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–13 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 3–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered -if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 25–70 mm long, 3–6 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 7 mm long, pubescent.

Glumes. Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, 6–19 mm long, chartaceous, without keels. Lower glume apex acute. Upper glume ovate, 10–18 mm long, chartaceous, without keels. Upper glume surface glabrous. Upper glume apex acute, mucronate.


Flower and Fruit. Lodicules 3, 4–5 mm long, glabrous. Anthers 6, 8–12 mm long, yellow. Stigmas 3. Caryopsis with adherent pericarp, apex unappendaged.

Fujian, Jiangxi, Zhejiang.


4–7 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs scanty or lacking. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1.5–4 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3–0.8 cm long. Leaf-blades lanceolate, 12–21 cm long, 12–26 mm wide. Leaf-blade venation with 6–14 secondary veins, with distinct cross veins. Leaf-blade surface glabrous or pubescent, sparsely hairy, hairy abaxially. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets. Spikelets solitary. Fertile spikelets sessile or pedicelled. Pedicels present, 0–23 mm long, pubescent, hairy above.

**Fertile Spikelets.** Spikelets comprising 3–15 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 19–92 mm long, 3–7 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2–5 mm long, pubescent.


**Florets.** Fertile lemma ovate, 15–20 mm long, chartaceous, without keel, more than 3-veined. Lemma surface puberulous. Lemma margins ciliate. Lemma apex acute. Palea 6–11 mm long. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, veined, glabrous. Anthers 6, 4–5 mm long, yellow. Stigmas 3. Ovary glabrous. Caryopsis with adherent pericarp, apex unappendaged.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central, China Southeast. Guangxi, Hunan, Jiangxi. Yunnan.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 141).

**Derivation.** (Clifford & Bostock 2007): L. beautiful, graceful. Mostly a reference to habit.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, 11–15 cm long, bearing few fertile spikelets, bearing 3–4 fertile spikelets on each. Spikelets ascending or pendulous, solitary. Fertile spikelets pedicelled. Pedicels present, 10–30 mm long, pubescent.

**Fertile Spikelets.** Spikelets with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 6 mm long, scaberulous, pubescent, hairy at tip.
Glumes. Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, 4–6 mm long, chartaceous, 1-keeled, keeled above. Lower glume surface smooth or scabrous, rough above. Lower glume apex acute. Upper glume lanceolate or ovate, 5–8 mm long, chartaceous, 1-keeled, keeled above. Upper glume surface smooth or scabrous, rough above. Upper glume apex acute.

Florets. Fertile lemma oblong or ovate, 13 mm long, chartaceous, without keel, more than 3-veined. Lemma lateral veins with cross-veins. Lemma margins ciliolate, hairy above. Lemma surface hispidulous. Lemma margins ciliolate, hairy above. Lower glume ovate, 1.6–2 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 2–2.5 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 2–2.5 mm long, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.5–1.8 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.7–1.1 mm long, purple. Caryopsis ellipsoid or oblong, 0.9–1.1 mm long, grey.


Country /Province /State. Mexico. Gulf (Mexico), Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Costa Rica, Guatemala, Honduras, Panama.


**Illustrations (Books):** G. Harling & C. Persson, *Flora of Ecuador* (2006) (78: 112, Fig. 5 (2006)).

**Derivation** (Clifford & Bostock 2007): L. slender. Culms or inflorescences slender.


**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 25–40 cm long. Ligule a ciliolate membrane. Leaf-blades 7–13 cm long, 3–4 mm wide. Leaf-blade margins scabrous.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acuminate, 2–2.5 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acuminate.

**Fertile Spikelets.** Spikelets comprising 2–6 fertile florets, with diminished florets at the apex. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2–3 mm long, 2 mm wide, breaking up at maturity, rhachilla persistent, retaining paleas.


**Illustrations:** None found.


**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Habit, Vegetative Morphology.** Culms 10–40 cm long, rooting from lower nodes. Ligule an eciliate membrane, 2 mm long. Leaf-blades 10–20 cm long, 3–7 mm wide, flaccid. Leaf-blade surface pilose, sparsely hairy, hairy abaxially.


**Sterile Spikelets.** Apical sterile spikelets rudimentary, 1 in number.

**Fertile Spikelets.** Spikelets comprising 2–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2–3 mm long, 2 mm wide, breaking up at maturity, rhachilla persistent, retaining paleas.
Glumes. Glumes deciduous, similar, shorter than spikelet. Lower glume ovate, 1.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acuminate, awned, 1 -awned, awn 1 mm long.

Florets. Fertile florets recurved at tip. Fertile lemma ovate, laterally compressed, ovate in profile, 1.5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins stopping well short of apex. Lemma apex entire, acute, awned, 1 -awned. Principal lemma awn 0.5 mm long overall. Palea ovate, bowed outwards, 0.8 length of lemma, 2 -awned. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 0.3 mm long. Stigmas 2. Caryopsis with free soft pericarp, ellipsoid, isodiametric, biconvex, estipitate, sulcate on hilar side, 0.6 mm long, rugose, apex unappendaged. Embryo 0.3–0.5 length of caryopsis. Hilum punctiform. Endosperm farinose.

Country /Province /State. Indian Subcontinent. India.


Accepted by: W.D Clayton & K.Harman, GrassBase (2008) and online.


Illustrations (Books): J.Bosser, Graminees des Paturage et des Cultures a Madagascar (1969) (176, Fig.61 as Camusia).


Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Caespitose. Culms 10–40 cm long. Ligule a ciliate membrane. Leaf-blades involute, 3–10 cm long, 0.5–1.5 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy abaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 2–6, digitate or borne along a central axis, unilateral, 1.5–6 cm long. Central inflorescence axis 0.5–3 cm long. Rhachis flattened, terminating in a sterile spikelet or barren extension, extension subulate. Spikelet packing broadside to rhachis, regular, 1 -rowed. Spikelets appressed, solitary. Fertile spikelets sessile.

Sterile Spikelets. Apical sterile spikelets rudimentary, 1 in number.

Fertile Spikelets. Spikelets comprising 3–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–6 mm long, breaking up at maturity, rachilla persistent, retaining paleas. Rachilla internodes eventually visible between lemmas.

Glumes. Glumes deciduous, similar, shorter than spikelet, recurved at apex. Lower glume lanceolate, 1.5 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate, mucronate. Upper glume ovate, 2 mm long, 0.8–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

Florets. Fertile florets recurved at tip. Fertile lemma oblong, laterally compressed, oblong in profile, 2–2.5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins extending close to apex. Lemma apex entire, acuminate, awned, 1 -awned. Principal lemma awn 0.3–0.9 mm long overall. Palea bowed outwards, 0.8 length of lemma, 2 -awned. Palea keels scabrous. Palea apex acute. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 1 mm long. Stigmas 2. Caryopsis with free soft pericarp, ellipsoid, laterally compressed, estipitate, without sulcus, 0.5–0.7 mm long, smooth or granular, apex unappendaged. Embryo 0.33 length of caryopsis. Hilum punctiform. Endosperm farinose.

Country /Province /State. Western Indian Ocean. Madagascar.


**TYPE** from India. **Basionym or Replaced Name:** *Eleusine racemosa* Heyne ex Roem. & Schult., *Syst. ii.* 583 (1817). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India orientali, D.B. Heyne s.n.


**Derivation** (Clifford & Bostock 2007): L. *racemus*, stalk of a cluster of grapes; -osa, abundance. The spikelets are borne in racemes or contracted panicles.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Habit, Vegetative Morphology.** Caespitose. Basal innovations intravaginal. Culms 15–75 cm long, 1–3 mm diam., 2–5 -noded. Lateral branches sparse. Leaves cauline. Leaf-sheaths as wide as blade at the collar, keeled. Ligule a ciliolate membrane, 0.5–1.25 mm long. Leaf-blades 15–75 cm long, 5–11.5 mm wide. Leaf-blade surface smooth, glabrous or pilose, sparsely hairy. Leaf-blade margins cartilaginous. Leaf-blade apex attenuate, filiform.

**Inflorescence.** Inflorescence composed of racemes. Racemes 3–25, digitate or borne along a central axis, in several whorls, unilaterial, 1.5–10 cm long. Central inflorescence axis 0–15 cm long. Rachis angular, terminating in a sterile spikelet. Spikelet packing broadside to rhachis, regular. Spikelets appressed, solitary or in pairs. Fertile spikelets sessile, 1–2 in the cluster. Pedicels absent.

**Spikelets.** Apical sterile spikelets rudimentary, 1 in number.

**Fertile Spikelets.** Spikelets comprising 6–25 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5.5–13 mm long, 2.5–3 mm wide, breaking up at maturity, rhachillia persistent, retaining paleas, tough throughout or fragile above, with the distal florets falling as a whole. Rachillia internodes 0.1 mm long, eventually visible between lemmas.

**Glumes.** Glumes deciduous, similar, shorter than spikelet. Lower glume lanceolate, 1.2–2.9 mm long, 0.5–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, mucronate. Upper glume ovate, 1.5–3 mm long, 0.5–0.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex entire, acuminate, mucronate.

**Florets.** Fertile florets recurved at tip. Fertile lemma ovate, laterally compressed, ovate in profile, 2.1–2.8 mm long, membranous, yellow to mid-green, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins excurrent. Lemma apex entire, acute, awned, 1 -awned. Principal lemma awn 0.3–0.9 mm long overall. Palea ovate, bowed outwards, 0.8 length of lemma, 2 -veined. Palea keels scabrous. Palea apex dentate, 2 -fid, acute. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 0.4 mm long. Stigmas 2, protandrous, laterally exerted. Caryopsis with free soft pericarp, ellipsoid, isodiametric, biconvex, estipitate, sulcate on
hilar side, 0.8–1 mm long, rugose, apex unappendaged. Embryo 0.4 length of caryopsis. Hilum punctiform. Endosperm farinose.

\[ n = 18 \] (1 ref TROPICOS).

**Distribution (TDWG).** **Continent.** Africa, Temperate Asia, Tropical Asia, Australasia, North America.


**TYPE** from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Ost-Africa am Kilimandscharo, im Gurtelwald oberhalb Marangu verbreitet, 2100 m.s.m., *Volkens J278* (HT: B?; IT: K).


**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Incertae Sedis.

**Habit, Vegetative Morphology.** Annual. Culms decumbent, 30–60 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades linear to lanceolate, 3–14 cm long, 4–15 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6.5 mm long, falling entire.

**Glumes.** Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5–1.5 mm long, 0.1–0.25 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 4.5–5.5 mm long, membranous, without keels, 3 -veined. Upper glume surface setose, with tubercle-based hairs. Upper glume apex acuminate, awned, 1 -awned, awn 10–20 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, setose, with tubercle-based hairs, acuminate, awned. Awn of lower sterile floret flexuous (tangled), 10–30 mm long. Fertile lemma lanceolate, 4.5–5.5 mm long, chartaceous, much thinner on margins, without keel, 5 -veined, more than 3-veined. Lemma margins flat, covering most of palea. Lemma apex acuminate, muticous or awned, 1 -awned. Principal lemma awn 1–2 mm long overall. Palea chartaceous, without keels.

**Flower and Fruit.** Caryopsis with adherent pericarp, oblong.

\[ 2n = 18 \] (1 ref TROPICOS).

**Distribution (TDWG).** **Continent.** Africa.


**Illustrations**: None found.

**Derivation** (Clifford & Bostock 2007): L. amplecto, encircle. Leaf-blades more or less heart-shaped.

**Classification**: Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology**. Annual. Culms decumbent, weak, 30–100 cm long, rooting from lower nodes. Ligule an eciliate membrane or absent. Leaf-blade base cordate or amplexicaul. Leaf-blades linear, 4–20 cm long, 3–10 mm wide. Leaf-blade venation without cross veins or with obscure cross veins.


**Fertile Spikelets**. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, subterete, 4.5–6 mm long, falling entire. Spikelet callus glabrous, base truncate.

**Glumes**. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.5–0.8 length of spikelet, herbaceous, without keels, keel-less except near apex, 3 -veined. Lower glume apex acuminuate. Upper glume ovate, 1 length of adjacent fertile lemma, herbaceous, 5 -veined. Upper glume apex laterally pinched.

**Florets**. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of fertile lemma, herbaceous, 5 -veined, laterally pinched at apex. Fertile lemma oblong, dorsally compressed, 4–5.5 mm long, indurate, pallid, more than 3-veined. Lemma margins involute. Lemma apex aciculate, with a little green crest. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined, without keels.

**Flower and Fruit**. Anthers 3, 2 mm long. Caryopsis with adherent pericarp, oblong, dorsally compressed, plano-convex, pallid. Embryo 0.4–0.5 length of caryopsis. Hilum linear, 1 length of caryopsis.

**Distribution** (TDWG). Continent. Africa.


**Illustrations**: None found.

**Derivation** (Clifford & Bostock 2007): L. thin. Spikelets terete or narrow.or panicles narrow;.

**Classification**: Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology**. Annual. Culms prostrate, 20–40 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, tapering towards sheath, 5–18 cm long, 5–20 mm wide. Leaf-blade venation with obscure cross veins. Leaf-blade surface glabrous or pubescent. Leaf-blade apex acuminate, filiform.

**Inflorescence**. Inflorescence a panicle. Panicle open, elliptic or oblong, 6–12 cm long, contracted about primary branches. Primary panicle branches appressed or ascending, 2–6 cm long, bearing spikelets
almost to the base. Panicle branches angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, fused to each other, united below, linear, angular, unequal.

**Fertile Spikelets**. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3–3.5(–4) mm long, falling entire. Spikelet callus glabrous, base truncate. Rachilla internodes elongated between glumes.

**Glumes**. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.75 length of spikelet, herbaceous, black, without keels, 3 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of adjacent fertile lemma, herbaceous, black, 3 -veined. Upper glume apex obtuse.

**Florets**. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of fertile lemma, herbaceous, 3 -veined, obtuse. Fertile lemma elliptic, dorsally compressed, 2.5–3.5 mm long, indurate, pallid, shiny, more than 3-veined.Lemma margins involute. Lemma apex acute, with a little green crest or with a green spot. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined, without keels.

**Distribution (TDWG).** Continent. Africa.


. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: "Comoren...", Boivin s.n..


**Illustrations**: None found.


**Fertile Spikelets**. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 2.2–2.5 mm long, falling entire.

**Glumes**. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1.2–1.3 mm long, 0.5 length of spikelet, herbaceous, 1-keeled, 3 -veined. Lower glume surface puberulous. Lower glume apex cuspidate. Upper glume ovate, 2.2–2.5 mm long, 1 length of spikelet, herbaceous, without keels, 7 -veined. Upper glume surface rugose, puberulous. Upper glume apex laterally pinched.

**Florets**. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, herbaceous, rugose, puberulous, laterally pinched at apex. Fertile lemma ovate, dorsally compressed, 2–2.3 mm long, indurate, light brown, shiny. Lemma margins involute. Lemma apex acute, mucronate. Palea involute, 1 length of lemma, indurate.

**Distribution (TDWG).** Continent. Africa.

Country /Province /State. Western Indian Ocean. Madagascar.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.


**Illustrations (Journals):** Darwiniana (28: 201, Fig. 2 (1987)).

**Derivation** (Clifford & Bostock 2007): in honor of Mary Agnes Merrill Chase (1869–1963) United States agrostologist.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology.** Perennial. Culms decumbent, 50–100 cm long, rooting from lower nodes. Leaf-sheaths 2–4 cm long, pilose. Ligule an eciliate membrane or a ciliolate membrane, 2–4 mm long. Leaf-blade base broadly rounded, symmetrical or asymmetrical. Leaf-blades lanceolate, 8–12 cm long, 12–20 mm wide. Leaf-blade surface glabrous or pilose.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 4.2–4.7 mm long, 1.4–1.6 mm wide, falling entire. Spikelet callus square, glabrous, base truncate. Rachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 2.1–2.5 mm long, 0.5 length of spikelet, herbaceous, without keels, 3–5 -veined. Lower glume surface pilose, hairy at apex. Lower glume apex obtuse. Upper glume elliptic, 3.6–4 mm long, 0.8–0.9 length of spikelet, herbaceous, 5 -veined. Upper glume surface pilose, hairy at apex. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, herbaceous, 5 -veined, pilose, hairy at apex, obtuse. Fertile lemma elliptic, dorsally compressed, 3.5–4 mm long, 1.2–1.4 mm wide, indurate, pallid. Lemma margins involute. Lemma apex acute, pubescent or with a little green crest. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined. Palea apex pubescent or with green spots.

Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil Southeast.
    Bahia. Rio de Janeiro.

Acroceras debilis Judz. ms.
Illustrations: None found.
Country /Province /State. Western Indian Ocean. Madagascar.

TYPE from China. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: China, Hainan, Qiongzhong; East Hainan Exped. 793.
Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 723 as Setiacis diffusa).
Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 3.2 mm long, falling entire.
Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, herbaceous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, herbaceous, 9–11 -veined. Upper glume apex acute.
Florrets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, herbaceous, 11 -veined, ciliolate on margins, acute. Palea of lower sterile floret membranous, pilose, adorned on keels. Fertile lemma elliptic, dorsally compressed, 3.2 mm long, coriaceous. Lemma margins involute. Lemma apex acute, pubescent. Palea coriaceous, 2 -veined. Palea apex pubescent.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.


Inflorescence. Inflorescence composed of racemes. Racemes 8–9, borne along a central axis, unilateral. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 1.5–1.7 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, laterally compressed, 1.5–1.7 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.8–0.9 mm long, 0.5 length of spikelet, herbaceous, without keels, 3 -veined. Lower glume surface rugose. Lower glume apex acute, mucronate. Upper glume ovate, 1.5–1.7 mm long, 1 length of spikelet, herbaceous, without keels, 5 -veined. Upper glume surface rugose, puberulous. Upper glume mucronate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, herbaceous, acute, mucronate. Fertile lemma oblanceolate, dorsally compressed, 1.5 mm long, indurate, pallid, shiny. Lemma margins involute. Lemma apex acute, mucronate. Palea involute, 1 length of lemma, indurate.


Country/Province/State. Western Indian Ocean. Reunion.


Derivation (Clifford & Bostock 2007): L. hollowed out.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 100–200 cm long. Culm-internodes 3–11 cm long. Culm-nodes brown, glabrous. Lateral branches sparse. Leaf-sheaths 4–7 cm long, glabrous on surface or pubescent, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 2–4.5 mm long, brown, pubescent on abaxial surface, truncate. Leaf-blade base simple. Leaf-blades linear or lanceolate, 15–20 cm long, 12–16 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy on both sides. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 3.3–3.8 mm long, 1.3–1.6 mm wide, falling entire. Spikelet callus square, 0.3 mm long, base truncate.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, claspers, 1.7–2.1 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface smooth or asperulous, glabrous or pubescent. Lower glume apex obtuse. Upper glume elliptic, 2.8–3.5 mm long, 0.9 length of spikelet, membranous, 5 -veined. Upper glume surface asperulous, rough on veins. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblange, 3.1–3.6 mm long, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, dorsally compressed, 2.9–3.5 mm long, 1.2–1.6 mm wide, indurate, dark brown. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse, pubescent or with a shallow excavation or with a green spot. Palea elliptic, involute, 1 length of lemma, indurate. Palea apex pubescent.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 2.1 mm long, dark brown. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil, Southern South America. Venezuela. Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Paraguay.


Illustrations (Journals): Darwiniana (28: 199, Fig. 1 (1987)).

Derivation (Clifford & Bostock 2007): L. fluminea, relating to a river; -ensis, denoting origin.


Habit, Vegetative Morphology. Perennial. Culms decumbent, 20–40 cm long, rootting from lower nodes. Lateral branches ample. Leaf-sheaths 4–10(–15) cm long, 12–17 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins scabrous.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 2.6–2.8(–3.3) mm long, falling entire. Rhachilla internodes elongated between glumes.
Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume elliptic, 0.9 length of spikelet, membranous, 5 -veined. Upper glume surface pubescent, hairy at apex. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 5 -veined, glabrous or pubescent, hairy at apex, acute. Fertile lemma elliptic, dorsally compressed, 2.6–2.8(~3.3) mm long, indurate. Lemma margins involute. Lemma apex obtuse, pubescent or with a shallow excavation or with a little green crest. Palea elliptic, involute, 1 length of lemma, indurate. Palea apex pubescent.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America. Country /Province /State. Western South America, Brazil. Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online (as Panicum).


Illustrations (Books): J.Bosser, Graminees des Paturage et des Cultures a Madagascar (1969) (411, Fig 156 as Brachiaria hubbardii).


Habit, Vegetative Morphology. Annual. Culms prostrate, slender, 5–20 cm long. Ligule a ciliate membrane. Leaf-blades 1–4 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle capitate, ovate, 0.5–1.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2–2.3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex acute, with a little green crest. Palea reflexed at apex, involute, indurate.


TYPE from Gabon. Basionym or Replaced Name: Commelinidium gabunense, Commelinidium mayumbense, Commelinidium nervosum.


Illustrations (Books): H.Jacques-Felix, Les Graminees d'Afrique tropicale (1962) (239, Fig. 165 as Commelinidium nervosum).


Habit, Vegetative Morphology. Perennial. Culms rambling, 20–60 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades lanceolate or ovate, tapering towards sheath, 2–10 cm long, 10–40 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous or pubescent. Leaf-blade apex acute.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, subterete, 4.5–5.5 mm long, falling entire. Spikelet callus glabrous, base truncate. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, herbaceous, without keels, 5 -veined. Lower glume surface puberulous, hairy at apex. Lower glume apex acute. Upper glume elliptic, 1 length of adjacent fertile lemma, herbaceous, 5 -veined. Upper glume surface puberulous, hairy at apex. Upper glume apex laterally pinched.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of fertile lemma, herbaceous, 5 -veined, laterally pinched at apex. Fertile lemma lanceolate, dorsally compressed, 4–5 mm long, indurate, pallid, shiny, more than 3-veined. Lemma margins involute. Lemma apex acute, pubescent or with a little green crest. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined, without keels.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

TYPE from Madagascar. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Madagascar: Pic d'Ivohibe (Bara), Humbert, 3315.

Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Culms decumbent, 40–80 cm long. Ligule an eciliate membrane. Leaf-blades 8–10 cm long, 6–7 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially or on both sides. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, unilateral, 0.5–2 cm long. Central inflorescence axis 4–12 cm long. Rhachis angular, glabrous on surface or pilose on surface. Spikelet packing contiguous, irregular. Spikelets ascending, in pairs. Fertile spikelets pedicelled. Pedicels present, linear, angular, unequal.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 4–4.5 mm long, falling entire. Spikelet callus glabrous, base truncate.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.7–0.8 length of spikelet, herbaceous, without keels, 3 -veined. Lower glume apex acute, awned, 1 -awned, awn 1 mm long. Upper glume ovate, 3.5–3.7 mm long, 0.9 length of spikelet, herbaceous, 1-keeled, 5 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, herbaceous, 5 -veined, laterally pinched at apex. Fertile lemma elliptic, dorsally compressed, 3.5 mm long, indurate, pallid. Lemma margins involute. Lemma apex acute, laterally pinched or with a little green crest. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined.


Illustrations (Books): R.M. Polhill, F.T.E.A., Gramineae (3(1982):566, Fig.135), G.V. Pope et al., Flora Zambesiaca 10 (51:3(1989), T. 12), L.K.A. Chippindall, Grasses and Pastures of South Africa (1955) (385, Fig. 329), G.E. Gibbs Russell et al., Grasses of Southern Africa (1990) (32, Fig. 11), S. Phillips, Poaceae (Gramineae) in I. Hedberg & S. Edwards, Flora of Ethiopia and Eritrea (1995) (211, Fig. 87).


**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms decumbent, 20–100 cm long. Culm-nodes glabrous. Ligule a fringe of hairs. Leaf-blades linear, parallel-sided or tapering towards tip, flat or convolute, 3–16 cm long, 1–8 mm wide. Leaf-blade venation without cross veins. Leaf-blade surface glabrous or pubescent.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, subterete, 4–4.8 mm long, falling entire. Spikelet callus glabrous, base truncate.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.8 length of spikelet, herbaceous, without keels, keel-less except near apex, 3 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of adjacent fertile lemma, herbaceous, without keels, keel-less except near apex, 5 -veined. Upper glume apex laterally pinched.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of fertile lemma, herbaceous, 5 -veined, laterally pinched at apex. Palea of lower sterile floret scabrous. Fertile lemma elliptic, dorsally compressed, 3.5–4.5 mm long, indurate, pallid, more than 3-veined. Lemma margins involute. Lemma apex apiculate, with a little green crest. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined, without keels.

**Flower and Fruit.** n = 18 (1 ref TROPICOS). 2n = 36 (2 refs TROPICOS).


Illustrations (Books): H. Duistermaat, Field Guide to the Grasses of Singapore (2005) (33, Fig. 19), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 724), G.G. Potgar, C.B. Salunkhe & S.R. Yadav, Grasses of Maharashtra (2012) (Fig. 127).

**Derivation** (Clifford & Bostock 2007): in honor of William Munro (1818–1880) Scots-born British soldier and amateur botanist who collected extensively in India.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology.** Perennial. Stolons present. Culms decumbent or prostrate or rambling, 25–50 cm long, rooting from lower nodes. Culm-nodes smooth, distally glabrous. Leaves cauline. Leaf-sheaths loose (tight towards apex), 1–3 cm long, mostly shorter than adjacent culm internode, striately veined, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, erose, obtuse. Leaf-blade base broadly rounded or cordate. Leaf-blades lanceolate, 3–8 cm long, 4–10 mm wide, glandular. Leaf-blade midrib evident, prominent beneath. Leaf-blade surface scaberulous. Leaf-blade margins scaberulous, tuberculate-ciliate or glabrous (rarely), hairy at base. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 3–4 mm long, falling entire. Spikelet callus glabrous, base truncate. Rachilla internodes elongated between glumes.

**Glumes.** Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 3.1 mm long, 0.66 length of spikelet, herbaceous, without keels, 5 -veined. Lower glume apex laterally pinched. Upper glume ovate, 3–4 mm long, 1 length of spikelet, herbaceous, 7 -veined. Upper glume apex laterally pinched.

**Florets.** Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 3–4 mm long, 1 length of spikelet, herbaceous, 7 -veined, laterally pinched at apex. Fertile lemma ovate, dorsally compressed, 3.3 mm long, indurate, pallid, 3 -veined, 0–3 -veined. Lemma margins involute. Lemma apex apiculate, laterally pinched or with a little green crest. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined. Palea apex lobed.

**Flower and Fruit.** Lodicules 2, obovate, 0.25 mm long, irregularly toothed. Anthers 2, 1 mm long.

\[ n = 9 \text{ (1 ref TROPICOS)} \]
\[ 2n = 18 \text{ (1 ref TROPICOS)} \]

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Madagascar. T:\<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Madagascar: Sud-Est: vallee du Mandrare, affluent de la Monampanily (Sud-Est); montagne au S. de Tanandava, forêt..., *Humbert 20,486*.

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology.** Annual. Culms decumbent or rambling, weak, 5–10 cm long, rooting from lower nodes. Culm-nodes pubescent. Ligule an eciliate membrane. Leaf-blades 1.7–2.3 cm long, 25 mm wide, flaccid. Leaf-blade surface puberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, linear, angular.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, acute, 2.2–2.6 mm long, falling entire. Spikelet callus glabrous, base truncate.

**Glumes.** Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.9–2 mm long, 0.75 length of spikelet, herbaceous, without keels, 3 -veined. Lower glume apex acute.
Upper glume lanceolate, 2.2–2.6 mm long, 1 length of spikelet, herbaceous, 5 -veined. Upper glume apex acute, mucronate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, herbaceous, 5 -veined, acute, mucronate. Fertile lemma elliptic, dorsally compressed, 2.3–2.5 mm long, indurate, pallid. Lemma margins involute. Lemma apex acute, with a little green crest. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Est: Sainte-Marie de Madagascar (*Boivin no. 1617*), type; environs d'Ambila (cote Est) (*Benoist, no. 825*).

Illustrations: None found.


Inflorescence. Inflorescence composed of racemes. Racemes 4–5, borne along a central axis, unilateral, 1–2.5 cm long. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 1.2–1.7 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 2.2 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 1.4–1.7 mm long, 0.66–0.75 length of spikelet, herbaceous, without keels, 3 -veined. Lower glume apex cuspidate, muticous or mucronate. Upper glume lanceolate or ovate, 2.2 mm long, 1 length of spikelet, herbaceous, without keels, 5 -veined. Upper glume surface puberulous. Upper glume apex laterally pinched.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, herbaceous, pubescent, acute. Fertile lemma ovate, dorsally compressed, 2 mm long, indurate. Lemma margins involute. Lemma apex acute, mucronate. Palea involute, 1 length of lemma, indurate.


**Acroceras tonkinense** (Balansa) C. E. Hubbard ex Bor. *Indian Forest Rec. n. s. Bot.* 1(3):78 (1938).


Fertile Spikelets. Spikelets comprising 1 basal sterile floret, 1 fertile floret, without rhachilla extension. Spikelets 1 of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 4.5–5.5 mm long, falling entire. Spikelet callus glabrous, base truncate.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, clasping, 2.8–3.8 mm long, 0.9 length of spikelet, herbaceous, without keels, 5(-7) -veined. Lower glume apex acute. Upper glume elliptic, 4.2 mm long, 0.8–0.9 length of spikelet, herbaceous, 5 -veined. Upper glume apex laterally pinched.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 4.5–5.5 mm long, 1 length of spikelet, herbaceous, 5 -veined, laterally pinched at apex. Fertile lemma elliptic, dorsally compressed, 4 mm long, indurate, pallid. Lemma surface striate. Lemma margins involute. Lemma apex acute, with a little green crest. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined.

Flower and Fruit. Anthers 3, 2 mm long.

Yunnan. Assam.


Illustrations (Journals): Ruizia (13:335, Fig 41a-c (1993)).


Habit, Vegetative Morphology. Perennial. Culms decumbent (from a prostrate base), 30–100 cm long, 1–2.5 mm diam., 10–20 -noded, rooting from lower nodes. Lateral branches sparse. Leaves cauleine. Leaf-sheaths wider than blade at the collar, outer margin hairy. Ligule an eciliate membrane, 0.5 mm long, truncate. Collar pilose. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 4–15 cm long, 6–26 mm


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, subterete, 4.5–6.5 mm long, 1.5–2.5 mm wide, falling entire. Spikelet callus glabrous, base truncate.

**Glumes.** Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.8 length of spikelet, herbaceous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of adjacent fertile lemma, herbaceous, 5 -veined. Upper glume apex laterally pinched.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of fertile lemma, herbaceous, 5 -veined, laterally pinched at apex. Palea of lower sterile floret hyaline. Fertile lemma elliptic, dorsally compressed, lanceolate in profile, 4–6 mm long, indurate, pallid, 5 -veined, more than 3-veined. Lemma surface striate, with distinct germination flap. Lemma margins involute. Lemma apex apiculate, with a little green crest. Palea reflexed at apex, elliptic, involute, 1 length of lemma, indurate, 2 -veined, without keels. Palea apex acute.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 2 mm long. Stigmas 2.

**Distribution (TDWG).** Continent: Africa, Tropical Asia, North America, South America.


**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (28, Fig. 1), E.J.Judziewicz et al, *American Bamboos* (1999) (149, Fig. 63 & 150, Fig. 64).


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Inflorescence.** Inflorescence a panicle or comprising only a few spikelets, comprising 2–4(–8) fertile spikelets, axillary, bracteate at branch bases. Panicle open, 3–6 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 20–40 mm long, glabrous or puberulous.

**Fertile Spikelets.** Spikelets comprising 7–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, compressed slightly, 60–75 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5–5.5 mm long, obscured by lemmas, pilose, hairy all along but hairs longer above.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume ovate, 5.5 mm long, 0.7–0.75 length of upper glume, coriaceous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 7.7 mm long, 0.6–0.7 length of adjacent fertile lemma, coriaceous, without keels, 11 -veined. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 12 mm long, chartaceous, without keel, 13 -veined, more than 3-veined. Lemma apex acute. Palea 1.1 length of lemma, chartaceous, 18 -veined. Palea keels winged, ciliate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 3–4 mm long, veined, glabrous or ciliate. Anthers 3, 5–9.2 mm long. Stigmas 2. Ovary umbonate, pubescent on apex. Caryopsis with free brittle pericarp, ellipsoid, 11–14.5 mm long. Embryo 0.15 length of caryopsis. Hilum linear, 1 length of caryopsis.


**TYPE** from Egypt. **Basionym or Replaced Name:** *Triticum bicorne* Forssk., *Fl. Aegypt.-Arab.* 26 (1775).


**Images:** L.Boulos, *Flora of Egypt* 4 (2005);

**Derivation** (Clifford & Bostock 2007): *L. bi-*, two; *cornus*, horn.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 15–45 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades flat or involute, 5–10 cm long, 2–2.5 mm wide.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, linear, bilateral, 5–8 cm long, bearing 12–16 fertile spikelets on each. Rhachis fragile at the nodes. Spikelet packing broadside to rhachis. Rhachis internodes oblong, 0.5 length of fertile spikelet, falling with spikelet above. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 1 in number.

**Fertile Spikelets.** Spikelets comprising 1–2 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets
one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally
compressed, 5.5–8.5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet. Lower glume oblong or obovate, 5–7 mm long, 1 length of upper
glume, coriaceous, without keels, 4–6 -veined. Lower glume lateral veins distinct, ribbed. Lower glume apex
with a unilateral tooth or dentate, 1–2 -fid. Upper glume oblong, 5–7 mm long, 1.2 length of adjacent
fertile lemma, coriaceous, without keels, 4–6 -veined. Upper glume lateral veins distinct, ribbed, parallel at apex.
Upper glume apex with a unilateral tooth or dentate, 1–2 -fid.

Florets. Fertile lemma elliptic, 4–6 mm long, coriaceous, keeled, keeled above, 5 -veined, more than 3-
veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn 30–60 mm long overall. Palea 2 -
veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

2n = 28 (2 refs TROPICOS).


Region. Northern Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.
Aegilops caudata L. Sp. Pl. 1051 (1753).

Accepted by: W.D Clayton & K.Harman, GrassBase (2008) and online.


Illustrations (Books): N.L.Bor, Gramineae in Flora of Iraq (1968) (177, Pl. 59).


Inflorescence. Inflorescence composed of racemes, deciduals as a whole. Racemes 1, single, linear, smoothly terete, bilateral, 4–11 cm long, bearing few fertile spikelets, bearing (3–)4–7(–9) fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile.

Sterile Spikelets. Basal sterile spikelets rudimentary, 2 in number.

Fertile Spikelets. Spikelets comprising 4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–12 mm long, falling entire, deciduals with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet. Lower glume oblong, asymmetrical, 9–10 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened, ribbed. Lower glume apex dentate, 2 -fid, awned only on distal spikelets (or shortly awned below), 1 -awned, awn 40–100 mm long. Upper glume oblong, asymmetrical, 9–10 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume apex dentate, 2 -fid, awned only on distal spikelets (or shortly awned below), 1 -awned, awn 40–100 mm long.

Florets. Fertile lemma oblong, 9–10 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid or 3 -fid, muticus. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

n = 7 (2 refs TROPICOS), 2n = 14 (4 refs TROPICOS).


Region. Southeastern Europe.

Country/Province/State. : Crete. Western Asia. Iran.


Habit, Vegetative Morphology. Annual, caespitose. Culms 20–50 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 2–6 cm long, 2.5–4.5 mm wide. Leaf-blade surface scabrous, rough on both sides, pilose, sparsely hairy, hairy on both sides.
**Inflorescence.** Inflorescence composed of racemes, deciduous as a whole. Racemes 1, single, obovate, bilateral, 2–4 cm long, bearing few fertile spikelets, bearing 2–3 fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis. Rhachis internodes oblong, 0.75 length of fertile spikelet. Spikelets ascending, solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 3 in number. Apical sterile spikelets barren, 2 in number, 2–3 mm long.

**Fertile Spikelets.** Spikelets comprising 4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–12 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, 7–11 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins thickened, ribbed. Lower glume surface pubescent. Lower glume apex awned, 2–3 -awned, awn 30–50 mm long. Upper glume oblong, 7–11 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins thickened, ribbed, parallel at apex. Upper glume surface pubescent. Upper glume awned, 2–3 -awned, awn 30–50 mm long.

**Florets.** Fertile lemma oblong, 8–12 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 2 -awned. Principal lemma awn 30–40 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicles 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

\[2n = 28\] (1 ref TROPICOS).

**Distribution (TDWG), Continent.** Temperate Asia

**Country/Province/State.** Caucasus, Western Asia. Iran, Iraq.

**Aegilops comosa** Sibth. & Sm. *Fl. Graec.* 75. t. 94. (1806).


**TYPE** from Greece. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: In insulis Graeciae frequens.,...

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *coma*, hair of the head; -osa, abundance. Upper spikelets of the spike awned thereby forming an apical tuft.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or decumbent, 15–40 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades conduplicate or involute, 1–6 cm long, 1–2 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides.

**Inflorescence.** Inflorescence composed of racemes, deciduous as a whole. Racemes 1, single, linear, smoothly terete, bilateral, 3–7 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis. Rhachis internodes linear, 9–11 mm long, 1 length of fertile spikelet. Spikelets appressed, solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 2(–3) in number.

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 9–11 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, 8–11 mm long, 1 length of upper glume, coriaceous, without keels, 7 -veined. Lower glume surface scabrous. Lower glume apex with a unilateral tooth or dentate, 2 -fid, awned only on distal spikelets, awn 3–12 mm long. Upper glume oblong, 8–11 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7 -veined. Upper glume lateral veins parallel at apex. Upper glume surface scabrous. Upper glume apex with a unilateral tooth or dentate, 2 -fid, awned only on distal spikelets, awn 3–12 mm long.

**Florets.** Fertile lemma elliptic, 9–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2–3 -fid. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.
**Flower and Fruit.** Lodicules 2, ciliate. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, ellipsoid, hairy at apex.

\( n = 7 \) (1 ref TROPICOS). \( 2n = 14 \) (2 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia.

**Region.** Northern Europe (*). Southeastern Europe.

**Country /Province /State.** : GB Aliens (Ryves et al). : Greece. **Northern Africa.** Morocco. **Western Asia.** East Aegean Is, Turkey.


**Classification.** Subfamily: Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 30–50 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 10–20 cm long, 4–10 mm wide. Leaf-blade surface glabrous or pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, moniliform, smoothly terete, bilateral, 4–8 cm long, bearing 6–8 fertile spikelets on each. Rhachis fragile at the nodes, semiterete. Spikelet packing broadside to rhachis. Spikelets appressed, solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets absent or rudimentary, 0–2 in number.

**Fertile Spikelets.** Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–14 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, asymmetrical, 8–10 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened, ribbed. Lower glume surface pubescent. Lower glume apex dentate, 2–4 -fid, truncate. Upper glume oblong, asymmetrical, 8–10 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed. Upper glume surface pubescent. Upper glume apex dentate, 2–4 -fid, truncate.

**Florets.** Fertile lemma oblong, 10–12 mm long, coriaceous, keeled, 5 -veined, more than 3-veined. Lemma apex entire or dentate, 2 -fid, with irregular lobes, truncate, muticous or awned, 1 -awned. Principal lemma awn flat below, 50–80 mm long overall (becoming longer above, but shorter than raceme). Palea 2 -veined. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, ciliate. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

\( 2n = 42 \) (2 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe (*). Temperate Asia, North America.

**Region.** Northern Europe (*).

**Country /Province /State.** : GB Aliens (Ryves et al). **Middle Asia.** Caucasus, Western Asia. Turkmenistan, Tadzhikistan, Uzbekistan. Iran, Iraq. **Northeast USA.** New York.


ST: *Host*, (LE). b= “Aegilops caudata 1797”.


**Derivation (Clifford & Bostock 2007):** L. *cylindrus*, cylinder; L. -ica, belonging to. Inflorescences cylindrical.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 20–40(–80) cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 4–12 cm long, 2–5 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, linear, flexuous, smoothly terete, bilateral, 6–11 cm long, bearing 4–6 fertile spikelets on each. Rhachis fragile at the nodes, semi-terete. Spikelet packing broadside to rachis. Rhachis internodes cuneate, 1 length of fertile spikelet. Spikelets appressed, solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 1–2 in number.

**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–14 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, asymmetrical, 7–9 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened, ribbed. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awwn terminal (from 1 tooth), awwn 9–18 mm long. Upper glume oblong, asymmetrical, 7–9 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awwn terminal (from 1 tooth), awwn 9–18 mm long.

**Florets.** Fertile lemma oblong, 9–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, awwn only on distal spikelets, 1 -awned. Principal lemma awwn 30–80 mm long overall (shorter than raceme). Palea 2 -veined. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, ciliate. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

2n = 28 (3 refs TROPICOS), or 42 (1 ref TROPICOS).

**Distribution (TDWG).** **Continent.** Europe, Temperate Asia, Tropical Asia, North America.

**Region.** **Northern Europe (*)& Southwestern Europe, Southeastern Europe, Eastern Europe.**

**Country /Province /State.** : GB Aliens (Ryves et al). : Czechoslovakia, Hungary. : France. : Bulgaria, Greece, Italy, Romania, Turkey Europe, Yugoslavia. Belarus, Krym, Central European Russia, East European Russia, North European Russia, South European Russia, Northwest European Russia, Moldova, Ukraine. Russian Far East, **Middle Asia, Caucasus, Western Asia, China.** Primorye. Kazakhstan, Turkmenistan, Tadzhikistan. Iran, Iraq, China North-Central, Qinghai. **Indian Subcontinent.** Pakistan. **Northwest USA, North-central USA, Northeast USA, Southcentral USA, Mexico.** Colorado. Northeast Mexico.

Hebei, Shaanxi. Chihuahua.


**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 20–40(–80) cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 4–12 cm long, 2–5 mm wide. Leaf-blade surface pilose, densely hairy.


**Sterile Spikelets.** Basal sterile spikelets rudimentary, 1–2 in number.

**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–14 mm long, falling entire.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, asymmetrical, 7–9 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened, ribbed. Lower glume apex with a unilateral tooth or dentate, 1–2 -fid. Upper glume oblong, asymmetrical, 7–9 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume apex dentate, 2 -fid.

**Florets.** Fertile lemma oblong, 9–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, awned only on distal spikelets, 1 -awned. Principal lemma awn 40–80 mm long overall (longer than raceme). Palea 2 -veined. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, ciliate. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

**Distribution (TDWG).** Continent: Europe.

**Region.** Southeastern Europe.

**Country /Province /State.** : Bulgaria, Greece, Crete, Yugoslavia.


**TYPE** from Italy. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Italy, Puglia: Gasparrini (FI syn, PAV) ; Italy, Sardinia: Moris (FI syn, TO).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Flower and Fruit.** 2n = 28 (1 ref TROPICOS).

**Distribution (TDWG).** Continent: Europe.

**Region.** Southeastern Europe.

**Country /Province /State.** : Italy.

Aegilops geniculata Roth. Catalect.1: 121 (1787).


Inflorescence. Inflorescence composed of racemes, deciduous as a whole. Racemes 1, single, obovate, bilateral, 1–2 cm long, 4–9 mm wide, bearing few fertile spikelets, bearing 2(–3) fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile.

Sterile Spikelets. Basal sterile spikelets rudimentary, 1–2 in number. Apical sterile spikelets barren, 2–3 in number, 2–3 mm long.

Fertile Spikelets. Spikelets comprising 3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 7–11 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet. Lower glume obovate, 6–10 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened, ribbed. Lower glume surface scabrous, rough on veins, pubescent. Lower glume apex truncate, awned, 3–4(–5) -awned, awn 15–25 mm long. Upper glume obovate, 6–10 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume surface scabrous, rough on veins, pubescent. Upper glume apex truncate, awned, 3–4(–8) -awned, awn 15–25 mm long.

Florets. Fertile lemma obovate, 7–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 3 -fid, awned, 3 -awned. Principal lemma awn 10–25 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

n = 14 (1 ref TROPICOS). 2n = 28 (3 refs TROPICOS).


Inflorescence. Inflorescence composed of racemes. Racemes 1, single, moniliform or lanceolate, bilateral, 4–8 cm long, bearing 6 fertile spikelets on each. Rhachis fragile at the nodes. Spikelet packing
broadside to rhachis. Rhachis internodes oblong, falling with spikelet alongside. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 1–2 in number.

**Fertile Spikelets.** Spikelets comprising 4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–15 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume elliptic, 7–8 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins distinct, ribbed. Lower glume surface pubescent. Lower glume apex dentate, 2 -fid, truncate, awned, 2 -awned, awn 6–12 mm long. Upper glume elliptic, 7–8 mm long, 0.8 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins distinct, ribbed, parallel at apex. Upper glume surface pubescent. Upper glume apex dentate, 2 -fid, truncate, awned, 2 -awned, awn 6–12 mm long.

**Florets.** Fertile lemma oblong, 8–9 mm long, coriaceous, without keel, 5 -veined. Lemma apex dentate, 2 -fid, truncate, awned, 1 -awned. Principal lemma awn subterete below, 6 mm long overall. Palea 2 -awned. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Middle Asia, Western Asia. Turkmenistan, Tadzhikistan, Uzbekistan. Iran, Iraq.


**Illustrations (Books):** N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 215 as var. *kotschyi*).


**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 12–25 cm long. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciiliate membrane. Leaf-blades 6–12 cm long, 1.5–4 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade margins ciliate.

**Inflorescence.** Inflorescence composed of racemes, decidueous as a whole. Racemes 1, single, lanceolate, bilateral, 0.5–4 cm long, 2.5–5 mm wide, bearing few fertile spikelets, bearing 2–6 fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 2–3 in number.

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–10 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong or ovate, 4–6 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins distinct, ribbed. Lower glume surface scabrous, rough on veins, glabrous or pilose. Lower glume apex dentate, 3 -fid, truncate, awned, 3 -awned, awn 10–30 mm long. Upper glume oblong or ovate, 4–6 mm long, 0.7–0.8 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins distinct, ribbed, parallel at apex. Upper glume surface scabrous, rough on veins, glabrous or pilose. Upper glume apex dentate, 3 -fid, truncate, awned, 3 -awned, awn 10–30 mm long.
**Florets.** Fertile lemma elliptic, 8–10 mm long, coriaceous, keeled, keeled above, 5 -veined, more than 3-veined. Lemma apex dentate, 1 -2 -fid, awned, 1–3 -awned. Principal lemma aawn 5–15 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

\[2n = 28\] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia.


**TYPE from Egypt. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Egypt, Alexandria: Schweinfurth (B lecto, CAIM, NPU, US).**


**Derivation** (Clifford & Bostock 2007): *L. longus*, long; -issima, most. Internodes very long.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms geniculately ascending, 40–110 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades flat or involute, 5–10 cm long, 3 mm wide. Leaf-blade surface glabrous or pilose.

**Inflorescence.** Inflorescence composed of racemes, not deciduous as a whole or deciduous as a whole. Racemes 1, single, linear, unilateral or bilateral, 10–20 cm long, bearing 10–20 fertile spikelets on each. Rhachis tough or fragile at the nodes. Spikelet packing broadside to rhachis. Rhachis internodes oblong, 1 length of fertile spikelet, when fragile falling with spikelet above. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets absent or rudimentary, 0–1 in number.

**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–14 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, 7–8 mm long, 1 length of upper glume, coriaceous, without keels, 6–7 -veined. Lower glume lateral veins distinct, ribbed. Lower glume apex dentate or lobed, 2 -fid, muticous or awned or aawned on only distal spikelets, 1 -awned, aawn 3–10 mm long. Upper glume oblong, 7–8 mm long, 0.8–0.9 length of adjacent fertile lemma, coriaceous, without keels, 6–7 -veined. Upper glume lateral veins distinct, ribbed, parallel at apex. Upper glume apex dentate or lobed, 2 -fid, muticous or awned or aawned on only distal spikelets, 1 -awned, aawn 3–10 mm long.

**Florets.** Fertile lemma oblong, 5–8 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1–3 -awned. Principal lemma aawn 5–15 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

\[n = 7\] (1 ref TROPICOS), \[2n = 14\] (5 refs TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia.

**Country /Province /State.** Northern Africa. Egypt. Western Asia. Palestine, Israel & Jordan.

**Aegilops lorentii** Hochst. Lorent, *Wanderungen* 326 (1845).


**TYPE from Turkey. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Turkey, Seleucia: von Lorent (TUB holo).**

Illustrations: None found.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 5–30 cm long. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 2–5 cm long, 2–3 mm wide. Leaf-blade surface glabrous or pilose.

**Inflorescence.** Inflorescence composed of racemes, deciduous as a whole. Racemes 1, single, lanceolate, bilateral, 1.5–2 cm long, bearing few fertile spikelets, bearing 2–3(–4) fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis, with upper internodes elongated. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 1–2 in number.

**Fertile Spikelets.** Spikelets comprising 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 8–11 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong or obovate, 7–10 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened, ribbed. Lower glume surface pubescent or pilose. Lower glume apex truncate, awned, 2–3 -awned, awn 20–70 mm long. Upper glume oblong or obovate, 7–10 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume surface pubescent or pilose. Upper glume apex truncate, awned, 2–3 -awned, awn 20–70 mm long.

**Florets.** Fertile lemma oblong, 8–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 1–2 -fid, awned, 1–2 -awned. Principal lemma awn subterete below, 8–30 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicles 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

2n = 14 (1 ref TROPICOS), or 28 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Temperate Asia.

**Region.** Southwestern Europe, Southeastern Europe, Eastern Europe.

**Country /Province /State.** : France, Spain. : Bulgaria, Greece, Italy, Crete, Romania, Yugoslavia, Krym. Middle Asia, Caucasus, Western Asia. Iran, Iraq.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Triticeae.


**Inflorescence.** Inflorescence composed of racemes, deciduous as a whole. Racemes 1, single, linear, smoothly terete, bilateral, 4–11 cm long, bearing few fertile spikelets, bearing (3–)4–7(–9) fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 2 in number.

**Fertile Spikelets.** Spikelets comprising 4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–12 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, asymmetrical, 9–10 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally
thickened, ribbed. Lower glume apex dentate, 2 -fid, awned only on distal spikelets (or shortly awned below), 1 -awned, awn 40–100 mm long. Upper glume oblong, asymmetrical, 9–10 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume apex dentate, 2 -fid, awned only on distal spikelets (or shortly awned below), 1 -awned, awn 40–100 mm long.

**Florets.** Fertile lemma oblong, 9–10 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid or 3 -fid, muticous. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

\[2n = 14\] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Temperate Asia.

**Region.** Southeastern Europe.

**Country /Province /State.** Bulgaria, Greece, Crete, Yugoslavia. **Western Asia.** Afghanistan, East Aegean Is, Iraq, Lebanon-Syria, Turkey.


**Illustrations (Books):** N.L.Bor, Gramineae in K.H.Rechinger, Flora Iranica. No. 70/30 (1970) (Tab. 30 as Amblyopyrum), N.L.Bor, Gramineae in Flora of Iraq (1968) (225, Pl. 76 as Amblyopyrum).

**Derivation** (Clifford & Bostock 2007): L. blunt. Lacking awns or lemmas and/or glumes truncate.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 30–90 cm long. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule absent. Leaf-blades 5–10 cm long, 3–5 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially, with tubercle-based hairs. Leaf-blade margins glabrous or tuberculate-ciliate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, linear, bilateral, 15–18 cm long, bearing 10–20 fertile spikelets on each. Rhachis fragile at the nodes (tardily), semiterete, glabrous on surface or pubescent on surface, scaberulous on margins. Spikelet packing broadside to rhachis. Rhachis internodes linear, 10–17 mm long, falling with spikelet above. Spikelets appressed, solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets absent.

**Fertile Spikelets.** Spikelets comprising 5–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 8–15 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes collateral, similar, shorter than spikelet. Lower glume oblong, 5–7 mm long, 1 length of upper glume, coriaceous, without keels, 5 -veined. Lower glume lateral veins ribbed. Lower glume surface glabrous or pilose. Lower glume apex entire, emarginate or truncate. Upper glume oblong, 5–7 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 9 -veined. Upper glume lateral veins ribbed, divergent at apex. Upper glume surface glabrous or pilose. Upper glume apex emarginate or truncate.

**Florets.** Fertile lemma oblong, 7–10 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous or pilose, hairy all along or above. Lemma apex emarginate or obtuse, muticous. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, ciliate. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, oblong, sulcate on hilar side, hairy at apex. Embryo 0.5–0.66 length of caryopsis. Hilum linear, 1 length of caryopsis.

\[n = *, 2n = 28\] (*).

**Distribution (TDWG).** Continent. Temperate Asia.
Country /Province /State. Caucasus, Western Asia. Transcaucasus. Turkey.


**TYPE** from France. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: OM: (LE). There are 3 sheets annotated by Requen as *A. neglecta* before publication but not cited there! van Slageren (p. 281, 1994), does not consider these as isotypes.

**HT:** *Requien misit*, 1833, France: Avignonon (BOLO-BERT; AV, MPU).


**Derivation** (Clifford & Bostock 2007): L. *negligo*, disregard. Often a segregate from another species with which confusion is likely.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 25–35 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 2–6 cm long, 2.5–3 mm wide. Leaf-blade surface pilose. Leaf-blade margins ciliate.

**Inflorescence.** Inflorescence composed of racemes, decidueus as a whole. Racemes 1, single, obovate, bilateral, 3–6 cm long, bearing few fertile spikelets, bearing 2(–3) fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 3 in number.

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 10–11 mm long, falling entire, decidueus with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume elliptic, gibbous, 9–10 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened, ribbed. Lower glume surface pubescent. Lower glume apex awned, 2–3 -awned, awn 20–50 mm long. Upper glume elliptic, gibbous, 9–10 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume surface pubescent. Upper glume awned, 2–3 -awned, awn 20–50 mm long.

**Florets.** Fertile lemma oblong, 10–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2–4 -fid, awned, 2–4 -awned. Principal lemma awn 10–25 mm long overall. Palea 2 -awned. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodices 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

\[ n = 21 \] (1 ref TROPICOS). \[ 2n = 28 \] (1 ref TROPICOS), or 42 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia.

**Region.** Northern Europe (*), Southwestern Europe, Southeastern Europe, Eastern Europe.

**Country /Province /State.** : GB Aliens (Ryves et al). : Corsica, France, Portugal, Sardinia, Spain. : Albania, Bulgaria, Greece, Italy, Crete, Romania, Sicily, Turkey Europe, Yugoslavia. Krym. **Northern Africa.** Libya. **Middle Asia, Western Asia.** Tadzhikistan.


**TYPE** from Europe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: ST: *van Royen s.n.*, Unknown (L).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *ovum*, egg, -ata, possessing. Inflorescences, spikelets, or leaf-blades in outline the shape of an egg in longitudinal section.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.
**Flower and Fruit.** 2n = 28 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, North America.

Region. Southwestern Europe. Eastern Europe.


**Type** from Scotland. **Basionym or Replaced Name:** Triticum peregrinum Hack., Ann. Scot. Nat. Hist. 1907, 102. (1907). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: IT: J. Fraser, Jul 1906, Scotland; Edinburgh, Leithe Docks (W; IT: US-75309 (ex W)).


**Derivation** (Clifford & Bostock 2007): L. foreigner.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 9–13 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 3–6 cm long, 2–3 mm wide. Leaf-blade surface pubescent, hairy on both sides.

**Inflorescence.** Inflorescence composed of racemes, deciduous as a whole. Racemes 1, single, lanceolate or ovate, bilateral, 1–2 cm long, bearing few fertile spikelets, bearing 2–7 fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 2–3 in number.

**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or ovate, laterally compressed, 5–7 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong or obovate, 3–5 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins distinct, ribbed. Lower glume surface scabrous, rough on veins. Lower glume apex dentate, truncate, awned, 2–3 -awned, awn 9–24 mm long. Upper glume oblong or obovate, 3–5 mm long, 0.66 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins distinct, ribbed, parallel at apex. Upper glume surface scabrous, rough on veins. Upper glume apex dentate, 2–3 -fid, truncate, awned, 2–3 -awned, awn 9–25 mm long.

**Florets.** Fertile lemma oblong, 4.5–7.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex entire or erose, emarginate or truncate, muticous or awned only on distal spikelets (shortly), 1 -awned. Principal lemma awn 20–120 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia.

Region. Southeastern Europe.


**Illustrations (Books):** N.Feinbrun-Dothan, Flora Palaestina 4 (1986) (Pl. 211).


Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, 10–50 cm long. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades flat or involute, 2–5 cm long, 1.5 mm wide.

Inflorescence. Inflorescence composed of racemes, deciduous as a whole, embraced at base by subtending leaf. Racemes 1, single, linear, bilateral, 5–11 cm long, bearing 8–12 fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis. Rhachis internodes oblong, 1 length of fertile spikelet. Spikelets solitary. Fertile spikelets sessile.

Sterile Spikelets. Basal sterile spikelets absent or rudimentary, 0–1 in number.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–14 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet. Lower glume oblong, 7–8 mm long, 1 length of upper glume, coriaceous, without keels, 6–7 -veined. Lower glume lateral veins distinct, ribbed. Lower glume apex dentate or lobed, 2 -fid, muticous or awned or awned only on distal spikelets, 1 -awned, awn 3–10 mm long. Upper glume oblong, 7–8 mm long, 0.8–0.9 length of adjacent fertile lemma, coriaceous, without keels, 6–7 -veined. Upper glume lateral veins distinct, ribbed, parallel at apex. Upper glume apex dentate or lobed, 2 -fid, muticous or awned or awned only on distal spikelets, 1 -awned, awn 3–10 mm long.

Florets. Fertile lemma elliptic, 8–10 mm long, coriaceous, keeled, keeled above, 5 -veined, more than 3-veined. Lemma apex dentate, 1–2 -fid, awned only on distal spikelets, 2 -awned. Principal lemma awn from a sinus, subterete below, 80–100 mm long overall. Lateral lemma awns present, arising on apex of lobes, 40–50 mm long. Palea 2 -awned. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.


2n = 14 (1 ref TROPICOS).


Country /Province /State. Western Asia. Palestine, Israel & Jordan.


TYPE from Israel. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Hab. Palastina: Beer-Jakob (an der Haifa-Kantara-Bahn), Tel-Aviv und Umgebung, Schechunath Borohov (coll. Eig); Herzlia, Arsuf.....


Habit, Vegetative Morphology. Annual. Culms 40–100 cm long. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades flat or involute, 10–20 cm long, 4–5 mm wide.


Sterile Spikelets. Basal sterile spikelets rudimentary, 1–2 in number.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 8–13 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet. Lower glume oblong, 6–7 mm long, 1 length of upper glume, coriaceous, without keels, 6–7 -veined. Lower glume lateral veins thickened, ribbed, parallel at apex. Lower glume surface scabrous. Lower glume apex dentate, 2 -fid. Upper glume oblong, 6–7 mm long, 0.75

**Florets.** Fertile lemma elliptic, 8–11 mm long, coriaceous, keeled, keeled above, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned or awned only on distal spikelets, 1 -awned. Principal lemma awn from a sinus, 30–80 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

\[ n = 7 \text{ (1 ref TROPICOS)} \]
\[ 2n = 14 \text{ (10 refs TROPICOS)} \]

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Palestine, Israel & Jordan.

### Aegilops speltoides Tausch.

Flora 9: 109 (1837).


**TYPE** from Turkey. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Turkey, Yoggat to Corum: Bornmuller 1753 (B neo, BM, FI, G, K, L, LD, NY, P, W, Z)).

**Illustrations (Books):** N.Feinbrun-Dothan, Flora Palaestina 4 (1986) (Pl. 212 as var. speltoides & var. ligustica), N.L.Bor, Gramineae in Flora of Iraq (1968) (189, Pl. 63).

**Derivation** (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to Spelta.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 20–70 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 5–15 cm long, 2–3 mm wide, glaucous. Leaf-blade surface scabrous, rough on both sides, pilose, sparsely hairy.

**Inflorescence.** Inflorescence composed of racemes, deciduous as a whole. Racemes 1, single, linear, straight or arcuate, bilateral, 8–11 cm long, bearing 6–13 fertile spikelets on each. Rhachis tough, semiterete. Spikelet packing broadside to rhachis. Rhachis internodes linear, 1 length of fertile spikelet. Spikelets appressed, solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets absent or rudimentary, 0–1 in number.

**Fertile Spikelets.** Spikelets comprising 4–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–14 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, asymmetrical, 5–9 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened, ribbed. Lower glume apex with a unilateral tooth. Upper glume oblong, asymmetrical, 5–9 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume apex with a unilateral tooth, truncate.

**Florets.** Fertile lemma oblong, 8–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, awned only on distal spikelets, 1 -awned. Principal lemma awn 20–120 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, ciliate. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

\[ n = 7 \text{ (1 ref TROPICOS)} \]
\[ 2n = 14 \text{ (10 refs TROPICOS)} \]

**Distribution (TDWG).** Continent. Europe, Temperate Asia.

**Region.** Northern Europe (*), Southwestern Europe, Southeastern Europe.

**Country /Province /State.** GB Aliens (Ryves et al). : France. : Bulgaria, Greece, Italy, Turkey Europe. Western Asia. Iran, Iraq.

### Aegilops tauschii Coss. Notes Crit. 69 (1849).


**Derivation** (Clifford & Bostock 2007): in honor of Ignaz Friedrich Tausch (1793–1848) Bohemian botanist.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 25–30 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 8–17 cm long, 3–5 mm wide. Leaf-blade surface scabrous, glabrous or pilose.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, linear, smoothly terete, bilateral, 5–10 cm long, 5–8 mm wide, bearing 9–11 fertile spikelets on each. Rachis fragile at the nodes. Spikelet packing broadside to rachis. Rachis internodes oblong, falling with spikelet above. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets absent or rudimentary, 0–2 in number.

**Fertile Spikelets.** Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–8 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, 5–6 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume apex with a unilateral tooth, truncate. Upper glume oblong, 5–6 mm long, 0.8–0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume apex with a unilateral tooth, truncate.

**Florets.** Fertile lemma oblong or ovate, 6–7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex entire, truncate, awned or awned only on distal spikelets, 1 -awned. Principal lemma awn subterete below, 30–40 mm long overall (lower spikelets 0–18). Palea 2 -awned. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

$2n = 14$ (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Temperate Asia, Tropical Asia.

**Region.** Northern Europe (*). Eastern Europe.

**Country /Province /State.** : GB Aliens (Ryves et al). Baltic States, Krym. Middle Asia, Caucasus, Western Asia, China, Russia. Kazakhstan, Kirgizistan, Turkmenistan, Tadzhikistan, Uzbekistan. Afghanistan, Iran, Iraq. China North-Central, China Southeast, Xinjiang. **Indian Subcontinent.** Pakistan, West Himalaya.


**Aegilops triuncialis** L. Sp. Pl. 1051 (1753).


**Illustrations (Books):** N.Feinbrun-Dothan, Flora Palaestina 4 (1986) (Pl. 216), N.L.Bor, Gramineae in Flora of Iraq (1968) (193, Pl. 65), T.A.Cope, Flora of Pakistan 143: Poaceae (1982) (597, Fig 68),

**Derivation** (Clifford & Bostock 2007): L. *tria*, three; *uncus*, hook; *-alis*, pertaining to. Glumes and lemmas, each with three awns about 2.5 cm long.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 15–45 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades flat or involute, 5–10 cm long, 1–2 mm wide. Leaf-blade surface glabrous or pilose.

**Inflorescence.** Inflorescence composed of racemes, not deciduous as a whole or deciduous as a whole. Racemes 1, single, lanceolate, bilateral, 3–6 cm long, bearing few fertile spikelets, bearing (3–)4–6 fertile spikelets on each. Rhachis tough or fragile at the nodes. Spikelet packing broadside to rhachis. Rhachis internodes oblong, when fragile falling with spikelet alongside. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 2–3 in number.

**Fertile Spikelets.** Spikelets comprising 4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–10 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, 7–10 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened, ribbed. Lower glume surface smooth or scabrous. Lower glume apex dentate. 3 -fid, awned, 2–3 -awned, awn 10–60 mm long. Upper glume oblong, 7–10 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins unequally thickened, ribbed, parallel at apex. Upper glume surface smooth or scabrous. Upper glume apex dentate, 3 -fid, awned, 2–3 -awned, awn 10–60 mm long.

**Florets.** Fertile lemma oblong, 7–10 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned only on distal spikelets, 3 -awned. Principal lemma awn 5–6 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

\[ n = 14 \] (1 ref TROPICOS). \[ 2n = 28 \] (5 refs TROPICOS).


Hebei, Shaanxi. Jiangsu.


**Derivation** (Clifford & Bostock 2007): L. *umbella*, parasol; *-ula*, diminutive; *-atum*, possession.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or decumbent, 10–30 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 3–10 cm long, 1–2 mm wide. Leaf-blade surface glabrous or pilose.

**Inflorescence.** Inflorescence composed of racemes, deciduous as a whole. Racemes 1, single, lanceolate or ovate, bilateral, 2.5–4 cm long, bearing few fertile spikelets, bearing 2 fertile spikelets on each. Rhachis flattened, terminating in a sterile spikelet. Spikelet packing broadside to rhachis. Rhachis
internodes cuneate, 2 mm long, 0.25 length of fertile spikelet. Spikelets ascending, solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, (2–)3 in number.
Apical sterile spikelets barren, 1–3 in number (many-awned).

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets obovate, laterally compressed, 7–11 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume obovate, 5–8 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins unequally thickened. Lower glume surface scabrous. Lower glume apex truncate, awned, 3–5 -awned, awn 20–35 mm long. Upper glume obovate, 5–8 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins parallel at apex. Upper glume surface scabrous, rough on veins. Upper glume apex truncate, awned, 3–5 -awned, awn 20–35 mm long.

**Florets.** Fertile lemma elliptic, 6–9 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins ciliolate. Lemma apex awned, 1–3 -awned. Principal lemma awn spreading, 15–35 mm long overall, limb scabrous. Lateral lemma awns absent or present, shorter than principal. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicles 2, ciliate. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, ellipsoid, hairy at apex.

\( n = 14 \) (2 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Temperate Asia.
**Region.** Northern Europe (*). Southeastern Europe.
**Country /Province /State.** GB Aliens (Ryves et al). Caucasus, Western Asia, China. Iran, Iraq. China North-Central, Qinghai.

**Aegilops uniaristata** Vis. Fl. Dalm. 3: 345. (1852).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. unus, one; arista, bristle; -ata, possessing. Lemma one-awned.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 20–40 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 3–5 cm long, 1–2 mm wide. Leaf-blade surface pilose.

**Inflorescence.** Inflorescence composed of racemes, deciduous as a whole. Racemes 1, single, lanceolate, bilateral, 1–1.5 cm long, bearing few fertile spikelets, bearing 3 fertile spikelets on each. Rhachis tough. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, (2–)3 in number.

**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or ovate, laterally compressed, 13–15 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume oblong, gibbous, 9–11 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins thickened, ribbed. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 30–50 mm long. Upper glume oblong, gibbous, 9–11 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins thickened, ribbed, parallel at apex. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 30–40 mm long.
**Florets.** Fertile lemma oblong, 9–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn 3 mm long overall. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

$2n = 14$ (3 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Temperate Asia.

**Region. Southeastern Europe.**

**Country /Province /State.** : Albania, Greece, Italy, Crete, Turkey Europe, Yugoslavia. **Western Asia.** Turkey.


**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** in honor of Nikolai Ivanovich Vavilov (1887–1942) Russian plant geneticist.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, robust, 30–75 cm long. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 10–20 cm long, 4–10 mm wide.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, moniliform, smoothly terete, bilateral, 10–15 cm long, bearing 7–10 fertile spikelets on each. Rhachis fragile at the nodes, semiterete. Spikelet packing broadside to rhachis. Rhachis internodes oblong, falling with spikelet alongside. Spikelets appressed, solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets absent or rudimentary, 0–2 in number.

**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 8–15 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume ovate, asymmetrical, 7–10 mm long, 1 length of upper glume, coriaceous, without keels, 7–10 -veined. Lower glume lateral veins unequally thickened, ribbed, parallel at apex. Lower glume surface pubescent. Lower glume apex dentate, 2–3 -fid, truncate, awned or awned only on distal spikelets, 1 -awned, awn terminal (on adaxial lobe), awn 10–25 mm long. Upper glume ovate, asymmetrical, 7–10 mm long, 0.9 length of adjacent fertile lemma, coriaceous, without keels, 7–10 -veined. Upper glume lateral veins unequally thickened, ribbed. Upper glume surface pubescent. Upper glume apex dentate, 2–3 -fid, truncate, awned or awned only on distal spikelets, 1 -awned, awn terminal (on adaxial lobe), awn 10–25 mm long.

**Florets.** Fertile lemma ovate, 8–11 mm long, coriaceous, keeled, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex dentate, 3 -fid, with outer lobes shorter, truncate, awned, 1 -awned or 2 -awned. Principal lemma awn flat below, 50–80 mm long overall. Lateral lemma awns absent or present, arising on apex of lobes. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

$2n = 42$ (3 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe (*), Temperate Asia.

**Region. Northern Europe (*).**

**Country /Province /State.** : GB Aliens (Ryves et al). **Western Asia, Arabian Peninsula.** Lebanon-Syria. Saudi Arabia.


**Derivation:** (Clifford & Bostock 2007): *L. venter*, belly; *-osa*, abundance. Spikelets inflated.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 30–65 cm long. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciiliate membrane. Leaf-blades 8–17 cm long, 1.5–4.5 mm wide. Leaf-blade surface pilose.

**Inflorescence.** Inflorescence composed of racemes, not deciduous as a whole or deciduous as a whole. Racemes 1, single, linear or moniliform, bilateral, 5 cm long, bearing few fertile spikelets, bearing 4–6 fertile spikelets on each. Rhachis tough or fragile at the nodes. Spikelet packing broadside to rhachis. Rhachis internodes oblong, when fragile falling with spikelet alongside. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets rudimentary, 1–2 in number.

**Fertile Spikelets.** Spikelets comprising 4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5–14 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume ovate, gibbous, 4.2–11 mm long, 1 length of upper glume, coriaceous, without keels, 7–9 -veined. Lower glume lateral veins thickened, ribbed. Lower glume surface smooth or asperulous, rough on veins. Lower glume apex dentate, 3 -fid, mucronate, 3 -awned, awn 17–95 mm long. Upper glume ovate, gibbous, 4.2–11 mm long, 1 length of adjacent fertile lemma, coriaceous, without keels, 7–9 -veined. Upper glume lateral veins thickened, ribbed, parallel at apex. Upper glume surface smooth or asperulous, rough on veins. Upper glume apex dentate, 3 -fid, awned, 3 -awned, awn 17–95 mm long.

**Florets.** Fertile lemma oblong, 4–11.3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins ciliolate. Lemma apex dentate, 3 -fid, awned, (2–)3 -awned. Principal lemma awn 50–95 mm long overall. Palea 6–11.5 mm long, 2 -veined. Palea keels scaberulous, ciliolate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Anthers 3, 3.2–4.7 mm long. Ovary pubescent on apex. Caryopsis with adherent pericarp, ovoid, 4.5–8 mm long, hairy at apex.

\[ n = 14 \] (2 refs TROPICOS). \[ 2n = 28 \] (4 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia.

**Region.** Northern Europe (*).**Western Europe, Southeastern Europe.**

**Country /Province /State.** : GB Aliens (Ryves et al). : Baleares, Corsica, France, Spain. : Italy, Sicily, Yugoslavia. **Northern Africa.** Algeria, Egypt, Libya, Morocco, Tunisia. **Western Asia, China.** China North-Central, Qinghai. Hebei, Shaanxi.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Russia. **T:<Type of Basionym>:** *fide* TROPICOS and Kew Synonomy Database: Turcomania, Lake Eroijlanduz: Makeda (LE holo).

**Illustrations:** None found.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Habit, Vegetative Morphology.** Annual, culms solitary. Culms erect or geniculately ascending, 3–12 cm long. Culm-nodes pubescent. Leaves distichous. Leaf-sheaths pilose, outer margin hairy. Ligule a ciliolate membrane, 0.1–0.2 mm long. Leaf-blades 2–3 mm wide. Leaf-blade surface glabrous.
**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, oblong, multilateral, 0.5–1.6 cm long, 0.4–1 mm wide. Spikelet packing broadside to rhachis, crowded. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 5–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume elliptic, 2–2.6 mm long, chartaceous, 1-keeled, 5–7 -veined. Lower glume surface pilose. Lower glume apex acute. Upper glume elliptic, 2–2.6 mm long, 0.7–0.8 length of adjacent fertile lemma, chartaceous, 1-keeled, 5–7 -veined. Upper glume surface pilose. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate or ovate, 2.6–3.2 mm long, chartaceous, keeled, 9–11 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma margins ciliate. Lemma apex acute, mucronate. Palea 1 length of lemma, hyaline, 2 -veined. Palea keels ciliate, adorned below, with 0.33 of their length adorned. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, fleshy. Anthers 3, 1.2–1.6 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country/Province/State.** Middle Asia. Tadzhikistan.


**TYPE** from Iran. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: N of Khorasan, Kashmar, Kuh Sorkh, road of Rivash to Ataieh, 1550 m., Ayatollahi & Zangui 14623 (HT: FUMH; IT: TARI).

**Illustrations:** None found.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Stolons present. Culms erect, 5–30 cm long. Culm-internodes distally pubescent. Leaves distichous. Leaf-sheaths glabrous on surface or pubescent, outer margin hairy. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades curved, linear or lanceolate, 0.1–4.5 cm long, 1–2 mm wide, indurate, stiff. Leaf-blade surface ribbed, scabrous, rough abaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate, pungent.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–12, borne along a central axis, in a bilateral false spike, appressed, unilateral, 0.5–1.5 cm long. Central inflorescence axis 1–2 cm long. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–4 mm long, 2–2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 2–2.2 mm long, 0.9 length of upper glume, chartaceous, much thinner on margins, 1-keeled, 2–3 -veined. Lower glume primary vein scabrous. Lower glume surface pubescent, hairy at base. Lower glume apex acute, mucronate. Upper glume ovate, 2.2–2.5 mm long, 1 length of adjacent fertile lemma, chartaceous, with membranous margins, 1-keeled, 3–5 -veined. Upper glume primary vein scabrous. Upper glume surface pubescent, hairy at base. Upper glume apex acute, mucronate.

**Florets.** Fertile lemma ovate, 2.25–2.5 mm long, chartaceous, keeled, 9–11 -veined, more than 3-veined. Lemma surface pilose (sparsely), hairy at base. Lemma margins ciliolate. Lemma apex aciplicate. Palea 1.8–2 mm long, 2 -veined. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy, truncate. Anthers 3, 1.2–1.5 mm long.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country/Province/State.** Western Asia. Iran.


Recent Synonyms: Aeluropus brevifolius (Willd.) Nees ex Steud., nom superfl, Nom. ed 2(1) 30 (1840).


Derivation (Clifford & Bostock 2007): Gk. lagos, hare; pous, foot; -oides, resembling.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated, scaly, hairy. Stolons absent or present. But sheaths villous. Culms geniculately ascending or prostrate, 5–30 cm long. Leaves cauline, distichous. Leaf-sheaths loose, open for most of their length, 0.4–1 cm long, longer than adjacent culm internode, without keel, indistinctly veined, glabrous on surface or pilose, outer margin glabrous (hyaline). Ligule a ciliolate membrane. Leaf-blade base broadly rounded, symmetrical. Leaf-blades lanceolate, 0.5–4 cm long. 2–3 mm wide, coriaceous, stiff, glaucous. Leaf-blade midrib indistinct. Leaf-blade surface ribbed, scabrous, rough on both sides, glabrous or pilose. Leaf-blade margins entire, scaberulous. Leaf-blade apex acuminate, pungent.

Inflorescence. Inflorescence composed of racemes. Peduncle 0.5–3 cm long, pubescent above. Racemes 1, single, oblong or globose, unilateral or multilateral, 0.5–1 cm long. Spikelet packing broadside to rhachis, crowded, regular, 2-rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 0–1 basal sterile florets, 4–18 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–6 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume elliptic, 1.5 mm long, 0.7–0.8 length of upper glume chartaceous, 1-keeled, 1–3 -veined. Lower glume surface villous. Lower glume apex acute. Upper glume elliptic, 2 mm long, 0.7–0.8 length of adjacent fertile lemma, chartaceous, 1-keeled, 3–5 -veined. Upper glume surface villous. Upper glume apex erose, obtuse.

Florets. Basal sterile florets absent or 1, barren, without significant palea. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma elliptic, 2–3 mm long, chartaceous, keeled, 9–11 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma surface villous. Lemma apex apiculate. Palea 1 length of lemma, hyaline, 2 -veined. Palea surface pilose, hairy on back or on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, ciliate, truncate. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp, oblong, dorsally compressed. Embryo 0.6 length of caryopsis. Hilum punctiform. n = 20 (2 refs TROPICOS).

Region. Southeastern Europe.


**TYPE** from France. **Basionym or Replaced Name:** Poa littoralis Gouan, *Fl. Monsp.* 470 (1765).


**Derivation** (Clifford & Bostock 2007): L. *litt(us)*, sea shore; -*ale*, pertaining to. Sand dune, salt marsh species or river-banks.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 2–12, borne along a central axis, in a bilateral false spike, appressed, unilateral, 0.5–1.5 cm long. Central inflorescence axis 1–4(–7) cm long. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 6–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume elliptic, 0.9 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume elliptic, 0.75 length of adjacent fertile lemma, chartaceous, 1-keeled, 5–7 -veined. Upper glume apex erose, obtuse.

**Florets.** Fertile lemma elliptic, 1.5–2.2 mm long, chartaceous, keeled, 9–11 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma surface glabrous. Lemma apex apiculate. Palea 1 length of lemma, 2 -veined. Palea surface asperulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy, truncate. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp, obovoid, dorsally compressed, plano-convex. Embryo 0.6 length of caryopsis. Hilum punctiform.

\[ n = 10 \text{ (1 ref TROPICOS +1−2B).} \] \[ 2n = 20 \text{ (2 refs TROPICOS).} \]

**Distribution (TDWG).** Continent, Europe, Africa, Temperate Asia, Tropical Asia.

**Region.** Southwestern Europe, Southeastern Europe, Eastern Europe.

**Country/Province/State.** : Corsica, France, Spain. : Albania, Bulgaria, Greece, Italy, Crete, Romania, Sicily, Turkey Europe, Yugoslavia. Krym, East European Russia, South Europe Russian, Northwest European Russia, Ukraine. **Northern Africa.** Algeria, Egypt, Libya, Morocco, Tunisia. Siberia, Middle Asia, Caucasus, Western Asia, Arabian Peninsula, China, Mongolia, Eastern Asia. Altay, Kirgizistan, Turkmenistan, Tadzhikistan, Uzbekistan. Iran, Iraq, Gulf States, Kuwait. Inner Mongolia, Manchuria, China North-Central, China Southeast, Xinjiang. Mongolia. **Indian Subcontinent, Indo-China.** Pakistan. Vietnam.

Gansu, Hebei, Shandong, Shanxi. Henan, Jiangsu.


**Illustrations (Books):** N.L.Bor, Gramineae in K.H.Rechinger, Flora Iranica. No. 70/30 (1970) (Tab. 58).

**Derivation (Clifford & Bostock 2007):** Gk. makros, large; ear of corn. Inflorescence large.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Habit, Vegetative Morphology.** Perennial. Culms decumbent or prostrate, 15–40 cm long, woody. Leaves distichous. Leaf-sheaths longer than adjacent culm internode. Ligule a fringe of hairs. Leaf-blades linear or lanceolate, flat or convolute, 1–8 cm long, 3–6 mm wide, coriaceous, stiff, glaucous. Leaf-blade surface ribbed, scabrous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, unilateral, 0.5–2.5 cm long, bearing 2–10 fertile spikelets on each. Central inflorescence axis 3–18 cm long. Spikelet packing broadside to rhachis, crowded. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 8–30 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or ovate, laterally compressed, 3–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate or ovate, 1.5–2.25 mm long, 0.66 length of upper glume, membranous, much thinner on margins, 1-keeled, 1–3 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume elliptic or ovate, 2.25–3 mm long, 0.75–0.9 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 3–3.5 mm long, chartaceous, without keel, 9–11 -veined, more than 3-veined. Lemma lateral veins prominent, ribbed. Lemma surface villos, hairy below, hairy between veins, with tubercle-based hairs. Lemma apex acute. Palea 1 length of lemma, 2 -veined. Palea keels scaberulous. Palea apex obtuse. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy, truncate. Anthers 3, 1 mm long. Caryopsis with adherent pericarp.

\[ n = 10 \] (1 ref TROPICOS +1–2B).

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.

**Country /Province /State.** Western Asia. Afghanistan, Iran. Indian Subcontinent. Pakistan.


**Illustrations:** None found.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Mongolia. Xinjiang. Mongolia.


**Illustrations:** None found.


**Illustrations:** None found.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Mongolia. Xinjiang. Mongolia.
**Derivation** (Clifford & Bostock 2007): L. *pilus*, a hair; -osa, abundance. The whole plant or any of its organs invested with long spreading hairs.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.


**Inflorescence.**Inflorescence composed of racemes. Racemes 2–12, borne along a central axis, in a bilateral false spike, appressed, unilateral, 0.5–1.5 cm long. Central inflorescence axis 1–4(–7) cm long. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 6–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume elliptic, 0.9 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume elliptic, 0.75 length of adjacent fertile lemma, chartaceous, 1-keeled, 5–7 -veined. Upper glume apex erose, obtuse.

**Florets.** Fertile lemma elliptic, 1.5–2.2 mm long, chartaceous, keeled, 9–11 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma surface hirsute, hairy all along. Lemma margins ciliate. Lemma apex aciculate. Palea 1 length of lemma, 2 -veined. Palea surface asperulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy, truncate. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp, obovoid, dorsally compressed, plano-convex. Embryo 0.6 length of caryopsis. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia.
Country /Province /State. China. Xinjiang.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 639 as *Aeluropus pungens var. pungens*).


**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Distribution (TDWG).** Continent. Europe, Temperate Asia, Tropical Asia.

**Region. Eastern Europe.**
**Country /Province /State.** South European Russia, Middle Asia, Western Asia, China, Russia. Kazakhstan, Kirgizistan, Turkmenistan, Uzbekistan. North Caucasus. China North-Central, Xinjiang.
**Indian Subcontinent.** India. Gansu.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 639).

**Derivation** (Clifford & Bostock 2007): L. *ense*, denoting origin. From Sina, now China.
**Classification.** Subfamily Chloridoideae. Tribe: Cynodonideae.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. Inner Mongolia, Manchuria, China North-Central, China Southeast, Xinjiang.


**Derivation** (Clifford & Bostock 2007): Gk. hyalos, glass; pteron, wing. Lemma has two large hyaline wings.

**Classification.** Subfamily Chloridoideae. Tribe: Chloridoideae incertae sedis.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–60 cm long, 4–6-noded. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades convolute, 15–25 cm long, 1–1.5 mm wide, glaucous. Leaf-blade surface pubescent, sparsely hairy, hairy adaxially. Leaf-blade margins spinulose.

**Inflorescence.** Inflorescence composed of racemes, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Racemes 1, single, flexuous, unilateral, 14–22 cm long. Rhachis angular, 0.7 mm wide, glabrous on surface, glabrous on margins. Spikelet packing broadside to rhachis, crowded. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma, gaping. Lower glume lanceolate, 7 mm long, 0.9–1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 7 mm long, 0.6 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume lateral veins ribbed.

**Florets.** Fertile lemma elliptic, 12–13 mm long, chartaceous, much thinner above, pallid, keeled, 3 -veined, 0–3 -veined. Lemma surface pubescent. Lemma margins ciliate. Lemma hairs white, 1 mm long. Lemma apex lobed, 2 -fid, with lanceolate lobes, incised 0.66 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, curved, 20 mm long overall. Palea ovate, 0.3 length of lemma, 2 -veined. Palea keels ciliate. Palea surface pubescent. Palea apex acuminate. Apical sterile florets 5–7 in number, barren, separate, elliptic (resembling fertile). Apical sterile lemmas pubescent, awned, 1 -awned.

**Flower and Fruit.** Lodicules 2, oblong, 0.5 mm long, fleshy. Anthers 3, 0.7 mm long. Caryopsis with free soft pericarp, ellipsoid, dorsally compressed, biconvex, 2 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Northeast Tropical Africa. Ethiopia (inc. Eritrea), Somalia.


**TYPE** from Somalia. T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: Benadir: Boscaglia di Mogadiscio lungo la strada di Afgoi fra il 4–5 km, 26 May 1913, Paoli 89.

**Illustrations:** None found.


**Classification.** Subfamily Chloridoideae. Tribe: Chloridoideae incertae sedis.
**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 15–70 cm long. Leaf-sheath oral hairs bearded. Ligule a ciliolate membrane. Leaf-blades filiform, convolute, 5–15 cm long, 0.5–1.5 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 16–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma, gaping. Lower glume lanceolate, 10–20 mm long, 0.6–1 length of upper glume, membranous, without keels, 1–3 -veined. Lower glume apex acuminate or setaceously acuminate. Upper glume elliptic, 16–20 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume lateral veins ribbed. Upper glume apex acuminate or setaceously acuminate.

**Florets.** Fertile lemma elliptic, 16–20 mm long, coriaceous, much thinner above, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins augmented by subsidiaries in lobes. Lemma surface pubescent, hairy on back or on veins. Lemma margins eciliate. Lemma apex lobed, 2 -fid, with linear lobes, incised 0.66–0.75 of lemma length, attenuate, awned, 3 -awned. Principal lemma awn from a sinus, curved, 25–45 mm long overall. Lateral lemma awns present, arising on apex of lobes, 1–16 mm long, shorter than principal. Palea ovate, 0.3 length of lemma, 2 -veined. Palea keels winged, narrowly winged, ciliate. Apical sterile florets 4 in number, barren, in a clump, elliptic, 20 mm long. Apical sterile lemmas lobed, 2 -fid, awned, 3 -awned.

**Flower and Fruit.** Lodicules 2, fleshy. Anthers 3. Caryopsis with free soft pericarp.

**Distribution (TDWG).** Continent. Africa.

**Country Province/State.** Northeast Tropical Africa. Somalia.


**TYPE** from Brazil. **Basionym or Replaced Name:** *Andropogon goyazensis* Hack., *Flora*, 48 : 122. (1885). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: ST: A.F.M. Glaziou 22571, no date, Brazil: Goias (K; IST: US-76469 (fragm. ex K)). Awns from first specimen cited no. 22438, also cited no. 22572. ST: Glaziou 22438, Brazil: Goias (K). ST: Glaziou 22438a, Brazil: Goias (K).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Goyaz Province, Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, erect, 5–6 cm long, bearing 5–6 fertile spikelets on each. Rhachis fragile at the nodes, flattened, ciliate on margins. Rhachis internodes linear. Rhachis internode tip oblique, flat. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, flattened, ciliate.

**Sterile Spikelets.** Basal sterile spikelets well-developed, 10–12 in number, male, lanceolate or oblong, 10–15 mm long, larger than fertile. Basal sterile spikelet glumes herbaceous, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 2 mm long, pubescent, base pungen, attached obliquely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or oblong, 1 length of spikelet, coriaceous, without keels, 7 -veined. Lower glume surface with a

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, hyaline, ciliate on margins. Fertile lemma linear, cartilaginous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, acute, awned, 1 -awned. Principal lemma awn geniculate, 50–65 mm long overall, with twisted column. Column of lemma awn pubescent. Palea absent or minute.

**Distribution (TDWG).** Continent. South America.


**Derivation (Clifford & Bostock 2007):** Gk. leptos, narrow; klados, branch. Culms slender.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial. Basal innovations extravaginal. Culms erect, slender, 50–60 cm long. Ligule a ciliolate membrane, 1.5 mm long. Leaf-blades 6–10 cm long, 2–3 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence composed of racemes. Peduncle scaberulous above. Racemes 1, single, erect, 3.5–4.5 cm long. Rhachis fragile at the nodes, flattened, ciliate on margins. Rhachis internodes linear, 3 mm long. Rhachis internode tip oblique, flat. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, flattened, 3 mm long, ciliate.

**Sterile Spikelets.** Basal sterile spikelets well-developed, 8–12 in number, male, lanceolate, 7–9 mm long, equalling fertile. Basal sterile spikelet glumes herbaceous.

Companion sterile spikelets well-developed, male, lanceolate, 7–10 mm long, as long as fertile, separately deciduous. Companion sterile spikelet callus square, 0.5 mm long, obtuse. Companion sterile spikelet glumes herbaceous, acute. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 7–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1–2 mm long, pilose, base pungent, attached obliquely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, without keels, 8 -veined. Lower glume surface with a longitudinal median groove, pubescent. Lower glume apex obtuse. Upper glume lanceolate, coriaceous, without keels. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret 3 mm long, hyaline. Fertile lemma linear, 4 mm long, cartilaginous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, acute, awned, 1 -awned. Principal lemma awn geniculate, 20–50 mm long overall, with twisted column. Column of lemma awn pubescent. Palea absent or minute.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil West Central, Brazil Southeast, Brazil South, Paraguay.

Agenium majus Pilger. Fedde, Repert. 43: 82 (1938).


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.


**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 3–6, digitate, drooping, 5 cm long. Central inflorescence axis 1–2 cm long. Rhachis fragile at the nodes, flattened, ciliate on margins. Rhachis internodes linear, 4 mm long. Rhachis internode tip oblique, flat. Raceme-bases linear, 5–10 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, flattened, 4–5 mm long, ciliate.

**Sterile Spikelets.** Basal sterile spikelets well-developed, 18 in number, male, lanceolate, 12 mm long, larger than fertile. Basal sterile spikelet glumes chartaceous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, subterete, 6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus linear, 1–1.5 mm long, bearded, base pungent, attached obliquely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, without keels, 8 -veined. Lower glume surface with a longitudinal median groove, pubescent, hairy above. Lower glume apex obtuse. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, hyaline, truncate. Fertile lemma linear, cartilaginous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, acute, awned, 1 -awned. Principal lemma awn geniculate, 60 mm long overall, with twisted column. Column of lemma awn pubescent. Palea absent or minute.

**Distribution (TDWG).** Continent. South America.


Agenium villosum (Nees) Pilger. Fedde, Repert. 43: 82 (1938).


**Type** from Brazil. Basionym or Replaced Name: Heteropogon villosum Nees, Agrost. Bras. 362 (1829). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: F. Sellow s.n., s.d., Brasilia eequinoctialis (B; IT: LE-TRIN-0345.02, US-925206 (ex Manila ex B)). US-925206 was annotated as Heteropogon villosum var. genuinus Hack., and has Reliquiae d. Sello Gram. no. 1276 2 ___ 160x.


**Illustrations (Books):** F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina 3 – 1, Aristidoideae a Pharoideae* (2012) (494), S.A.Renvoize, *Gramineas de Bolivia* (1998) (606, Fig. 144), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (528, Fig. 190), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Ilustrada Catariensis Gramineas* (1981–1982) (1196, Fig. 234 & 1207, Fig. 237), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (506, Fig. 213), B.Rosengurt,
**Gramineas Uruguayas** (1970) (158, Fig. 61), R.Pilger, *Die Naturlichen Pflanzenfamilien* 14e (1940) (183, Fig. 98).

**Derivation** (Clifford & Bostock 2007): *L. villi*, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.


**Habit, Vegetative Morphology**. Perennial, caespitose. Culms 15–50 cm long. Ligule an eciliate membrane. Leaf-blades 10–25 cm long, 2–4 mm wide.


**Sterile Spikelets**. Basal sterile spikelets well-developed, 4–9 in number, male, 5–6 mm long, equalling fertile. Basal sterile spikelet glumes herbaceous, villous.

Companion sterile spikelet callus cuneate, 0.5 mm long, obtuse. Companion sterile spikelet glumes herbaceous, tuberculate, villous, acute. Companion sterile spikelet lemma 2, enclosed by glumes.

**Fertile Spikelets**. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 5–7.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus linear, 1 mm long, bearded, base pungent, attached obliquely. Spikelet callus hairs red.


**Florets**. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblanceolate, 3–4 mm long, hyaline, 2 -veined, truncate. Fertile lemma linear, cartilaginous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, acute, awned, 1 -awned. Principal lemma awn geniculate, 30–40 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Distribution (TDWG).** Continent: South America. Country /Province /State. Western South America, Brazil. Southern South America. Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.


**Illustrations (Books):** E.J.Judziewicz et al, *American Bamboos* (1999) (263, Fig. 161).

**Illustrations (Journals):** Novon (3:308, Fig.1 (1993)).

**Derivation** (Clifford & Bostock 2007): *L. lanceus*, lance; *folium*, leaf. Leaf-blade lanceolate.

**Classification.** Subfamily Bambusoideae. Tribe: Olyreae.

0.5 mm long. Ligule a ciliolate membrane, 0.3–0.6 mm long. Leaf-blade base cuneate, asymmetrical, with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long, petiole pubescent. Leaf-blades lanceolate, 6–16 cm long, 3–30 mm wide, mid-green or mid-green and purple, discolorous with last colour beneath. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, subtended by an unspecialized leaf-sheath or bracts (1 bract when a short basal branch present), embraced at base by subtending leaf, with 1–4 peduncles per sheath. Axillary inflorescences similar to terminal. Peduncle 4–8 cm long, pubescent above. Racemes 1, single, 2–4 cm long, bearing few fertile spikelets, bearing 1(–4) fertile spikelets on each. Sexes segregated, on bisexual branches, with male below, with 4–12 male spikelets per branch. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, 0.5–3 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, dorsally compressed, 11–15 mm long, falling entire or breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–10 mm long, 1 length of upper glume, chartaceous, without keels, 5(–8) -veined. Lower glume lateral veins convergent at apex. Lower glume surface glabrous or puberulous, inner surface scabrous (above). Lower glume apex acuminated, awned, 1 -awned, awn 4.5–8 mm long. Upper glume lanceolate, 7–10 mm long, chartaceous, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume apex acute, awned, 1 -awned, awn 2.5–5 mm long.

**Florets.** Fertile florets female. Fertile lemma elliptic, 7–8 mm long, 1.7–2 mm wide, indurate, pallid and purple, mottled with last colour, shiny, without keel. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs 1 mm long. Lemma apex acute, awned, 1 -awned. Principal lemma awn 1–1.5 mm long overall. Palea indurate.

**Flower and Fruit.** Male spikelets distinct from female, 1 flowered, separately deciduous, linear, 7–8 mm long, hairy. Male spikelet glumes absent. Male spikelet lemma 7–8 mm long, 3 -veined, awned, with 1–2 mm long awn.

**Distribution (TDWG).** Continent South America. Country /Province /State. Western South America and Brazil. Colombia, Peru. Brazil North. Amazonas, Pará.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Wray M. Bowden (1914-) Canadian botanist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Richard Cayouette (1914–1997) and his son, Jacques Cayouette (1944-) Canadian botanists.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


Illustrations: None found.

**Derivation** (Clifford & Bostock 2007): L. pilus, a hair; -osa, abundance; Gk lemma, hask. Lemma densely hairy.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online.

**TYPE** from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Dorofeevka: Abolin & Popov 8132 (TAK lecto).

Illustrations: None found.

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Badan Khrebet a mountain range in Siberia.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, linear, bilateral, 1.5–3 cm long, 6–9 mm wide. Spikelet packing broadside to rhachis. Rhachis internodes oblong, 3–4 mm long. Spikelets ascending, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, compressed strongly, 9–12 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 5 mm long. 0.8 length of upper glume, coriaceous, 1-keeled, keeled all along, 1 -veined. Lower glume apex attenuate, awned, 1 -awned, awn 1–2 mm long. Upper glume lanceolate, 6 mm long, 0.8 length of adjacent fertile lemma, coriaceous, 1-keeled, keeled all along, 3 -veined. Upper glume lateral veins convergent at apex. Upper glume apex attenuate, awned, 1 -awned, awn 1–2 mm long.

**Florets.** Fertile lemma elliptic, 7 mm long, chartaceous, shiny, keeled, 5 -veined, more than 3-veined. Lemma apex acute, awned, 1 -awned. Principal lemma aww 0.5–1.5 mm long overall. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Anthers 3 mm long. Ovary pubescent on apex. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Middle Asia. Turkmenistan.


Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online.

**TYPE** from Iran. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Hab. in Persia, Aucher. 3065.

Illustrations: None found.


**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths thickened and forming a bulb. Culms erect or geniculately ascending, 10–20 cm long. Lateral branches lacking. Leaf-sheath oral hairs
lacking. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 5–10 cm long, 1–3 mm wide. Leaf-blade surface puberulous, densely hairy, hairy adaxially. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, oblong, bilateral, 2–3 cm long, 12 mm wide. Rhachis scabrous on margins. Spikelet packing broadside to rhachis. Rhachis internodes oblong, 2 mm long. Spikelets pectinate, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, compressed strongly, 8–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 5–6 mm long, 1 length of upper glume, coriaceous, much thinner on margins, 1-keeled, keeled all along, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acute, awned, 1 -awned, awn 8–10 mm long. Upper glume lanceolate, 5–6 mm long, 0.6–0.7 length of adjacent fertile lemma, coriaceous, with hyaline margins, 1-keeled, keeled all along, 5 -veined. Upper glume primary vein scabrous. Upper glume lateral veins convergent at apex. Upper glume apex acute, awned, 1 -awned, awn 8–10 mm long.

**Florets.** Fertile lemma elliptic, 8–9 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn 6–9.5 mm long overall. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2. Ovary pubescent on apex. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia. Country /Province /State. Western Asia. Iran.


Illustrations: None found.

**Derivation** (Clifford & Bostock 2007): L. -icum, belonging to. From the region of the Cimmerii, who lived about the River Dnieper, former Soviet Union.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms 25–50 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1 mm long. Leaf-blades convolute, 15–30 cm long, 2–4 mm wide. Leaf-blade surface puberulous, hairy adaxially.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, bilateral, 6–11 cm long, 8–15 mm wide. Rhachis pubescent on surface. Spikelet packing broadside to rhachis, crowded. Rhachis internodes oblong, 2–5 mm long. Spikelets pectinate, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 3.5–6 mm long, 1 length of upper glume, coriaceous, 1-keeled, keeled all along, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1 -awned, awn 1–2 mm long. Upper glume lanceolate, 3.5–6 mm long, 0.6–0.8 length of adjacent fertile lemma, coriaceous, 1-keeled, keeled all along, 1 -awned. Upper glume lateral veins absent. Upper glume apex acuminate, awned, 1 -awned, awn 1–2 mm long.

**Florets.** Fertile lemma elliptic, 6–7 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acute, muticous or awned, 1 -awned. Principal lemma awn 0.5–2 mm long overall. Palea keels ciliate, with 1–10 enations per keel. Apical sterile florets resembling fertile though underdeveloped.
**Flower and Fruit.** Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, oblong, sulcate on hilar side, hairy at apex, apex fleshy. Embryo 0.2 length of caryopsis. Hilum linear, 1 length of caryopsis.

**Distribution (TDWG).** Continent. Europe.

Region. Eastern Europe.

Country /Province /State. Krym, Northwest European Russia, Ukraine.


**TYPE** from Russia. **Basionym or Replaced Name:** Bromus cristatus L., Sp. Pl. 78 (1753). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Siberia: Coll?.


**Derivation** (Clifford & Bostock 2007): L. crested. Inflorescence forming a crest.;

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms decumbent, 20–70 cm long. Leaf-sheath oral hairs lacking. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades involute, 6–12 cm long, 1.5–3 mm wide, stiff.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, oblong, bilateral, 1–5 cm long. Rhachis pilose on surface. Spikelet packing broadside to rhachis. Spikelets pectinate, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 3–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, compressed strongly, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume ovate, 3–5 mm long, 1 length of upper glume, coriaceous, 1-keeled, keeled all along, 3 -veined. Lower glume surface glabrous or pilose. Lower glume apex acuminate, awned, 1 -awned, awn 1–2 mm long. Upper glume ovate, 3–5 mm long, 0.66 length of adjacent fertile lemma, coriaceous, 1-keeled, keeled all along, 3 -veined. Upper glume lateral veins convergent at apex. Upper glume surface glabrous or pilose. Upper glume apex acuminate, awned, 1 -awned, awn 1–2 mm long.

**Florets.** Fertile lemma elliptic, 5–7 mm long, chartaceous, keeled, keeled above, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 3–4 mm long overall, limb scabrous. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, oblong, sulcate on hilar side, hairy at apex, apex fleshy. Embryo 0.2 length of caryopsis. Hilum linear, 1 length of caryopsis.

2n = 14 (9 refs TROPICOS), or 28 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Tropical Asia, North America (*), South America (*).

**Region.** Northern Europe (*), Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.

Agropyron dasyanthum Ledebr. Ind. Sem. Dorpat. 3. (1820).


TYPE from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Oleschky: Coll? (LE holo).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. dasys, hairy; anthos, flower. Glumes and lemmas densely hairy.


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms 40–75 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades convolute, 10–20 cm long, 2–4 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface puberulous, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, bilateral, 6–15 cm long, 7–18 mm wide. Rachis glabrous on surface or pubescent on surface. Spikelet packing broadside to rachis, lax. Rachis internodes oblong, 3–10 mm long. Spikelets spreading or pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–12 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 5–8 mm long, 1 length of upper glume, coriaceous, 1-keeled, keeled all along, 1 -veined. Lower glume primary vein eciliate or ciliate. Lower glume lateral veins absent. Lower glume apex acuminate, mucronate. Upper glume lanceolate, 5–8 mm long, 0.75–1 length of adjacent fertile lemma, coriaceous, 1-keeled, keeled all along, 1 -veined. Upper glume primary vein eciliate or ciliate. Upper glume lateral veins absent. Upper glume apex acuminate, mucronate.

Florets. Fertile lemma elliptic, 7–8 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma apex acute. Palea keels eciliate or ciliate, with 1–3 enations per keel. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 5 mm long. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, oblong, sulphate on hilar side, hairy at apex, apex fleshy. Embryo 0.2 length of caryopsis. Hilum linear, 1 length of caryopsis.

Distribution (TDWG). Continent. Europe.

Region. Eastern Europe.

Country /Province /State. Northwest European Russia, Ukraine.


TYPE from Turkey. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Turkey, Van, cult. in Utah: Harlan PI 173622.

Illustrations: None found.
**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–75 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane. Leaf-blades involute, 10–25 cm long, 4–6 mm wide. Leaf-blade surface hirsute, sparsely hairy, hairy on both sides. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Peduncle hirsute above. Racemes 1, single, lanceolate or oblong, bilateral, 5–7 cm long, 15 mm wide. Rhachis pilose on surface. Spikelet packing broadside to rhachis. Spikelets pectinate, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 3–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma.

**Florets.** Fertile lemma lanceolate, 5–8 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 5–8 mm long overall, limb scabrous. Palea 5–7 mm long. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 3, 3–4 mm long, yellow.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Siberia, Middle Asia. Altay, Irkutsk, Krasnoyarsk. Kazakhstan.


TYPE from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: West Siberia, Altai, valley of river Chuya (TK).

Illustrations: None found.


Inflorescence. Inflorescence composed of racemes. Peduncle scaberulous above. Racemes 1, single, linear or oblong, bilateral, 8–12 cm long, 7–14 mm wide. Rhachis pubescent on surface. Spikelet packing broadside to rhachis, crowded. Rhachis internodes oblong. Spikelets ascending, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 4–8 mm long, 1 length of upper glume, coriaceous, 1-keeled, keeled all along, 3–4 -veined. Lower glume primary vein ciliate. Lower glume apex acuminate. Upper glume lanceolate, 4–8 mm long, 0.75–1 length of adjacent fertile lemma, coriaceous, 1-keeled, keeled all along, 3–4 -veined. Upper glume primary vein ciliate. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 7–9 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma surface glabrous or pubescent. Lemma apex acute, awned, 1 -awned. Principal lemma awn 0.5–1.5 mm long overall. Palea 1 length of lemma. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 4 mm long. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, hairy at apex, apex fleshy. Hilum linear.


**TYPE** from Russia. T:&lt;Type of Basionym&gt;: fide TROPICOS and Kew Synonomy Database: Russia, Transbaical, Peschanoe Lake; Mikhnov (LE lecto).


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 616).

**Derivation** (Clifford & Bostock 2007): honor of P. Michno (fl. 1924) Russian botanist.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, oblong or ovate, bilateral, 2–8 cm long, 10–20 mm wide. Rachis pubescent on surface. Spikelet packing broadside to rachis, crowded. Rachis internodes oblong. Spikelets pectinate, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 4–6 mm long, 1 length of upper glume, coriaceous, much thinner on margins, 1-keeled, keeled all along. Lower glume primary vein eciliate or ciliate. Lower glume apex acuminate, awned, 1 -awned, awn 1 mm long. Upper glume lanceolate, 4–6 mm long, 0.75–1 length of adjacent fertile lemma, coriaceous, with scarios margins, 1-keeled, keeled all along. Upper glume primary vein eciliate or ciliate. Upper glume apex acuminate, awned, 1 -awned, awn 1 mm long.

**Florets.** Fertile lemma lanceolate, 6–8 mm long, chartaceous, glaucous, keeled, 5 -veined, more than 3-veined. Lemma surface pilose to villous. Lemma apex acute, awned, 1 -awned. Principal lemma awn 2 mm long overall. Palea 1 length of lemma. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 3, 5–5.5 mm long. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, hairy at apex, apex fleshy. Hilum linear.

**Distribution (TDWG).** Continent. Temperate Asia.


**TYPE** from Mongolia. T:&lt;Type of Basionym&gt;: fide TROPICOS and Kew Synonomy Database: collected on exposed sandy and rocky slope, Payin Obo, about 90 li northeast of Peiling Miao, Suiyuan Province, Aug. 9, 1935, Y.L. Keng # 3400 (Roerich Exp. 748).

**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 615 as *Agropyron mongolicum* var. mongolicum & as *Agropyron mongolicum* var. villosum).

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to. From Mongolia.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms geniculately ascending, 20–50 cm long, 1–1.2 mm diam., 1–3 -noded, with 0.15–0.6 of their length below uppermost node. Leaf-sheaths tight, 3.5–8 cm long, mostly shorter than adjacent culm internode, glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long, truncate. Leaf-blades straight or curved, involute, 2.5–8 cm long, 2–3 mm wide, stiff, glaucous. Leaf-blade surface puberulous, hairy adaxially.
Inflorescence. Inflorescence composed of racemes. Peduncle glabrous or pubescent above. Racemes 1, single, bilateral, 3.5–7 cm long, 5–7 mm wide. Rhachis with scattered hairs to puberulous on surface. Spikelet packing broadside to rhachis. Rhachis internodes linear, 2–5 mm long. Spikelets ascending, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile spikelets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic to oblong, laterally compressed, 8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes 1 mm long, pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 4–5 mm long, 0.8 length of upper glume, coriaceous, much thinner on margins, without keels, 3 -veined. Lower glume apex setaceously acuminate. Upper glume lanceolate, 5–6 mm long, 0.8–0.9 length of adjacent fertile lemma, coriaceous, with scarious margins, without keels, 3 -veined. Upper glume apex setaceously acuminate.

Florets. Fertile lemma lanceolate, 6–7 mm long, coriaceous, 5 -veined, more than 3-veined. Lemma surface glabrous or puberulous. Lemma apex acute, mucronate. Palea 1 length of lemma. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 3 mm long. Stigmas 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, ellipsoid, 4 mm long.


Illustrations: None found.
Country /Province /State. China. Xinjiang.


**TYPE** from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Oblivskaya: Gael (LE holo, K).

Illustrations: None found.
Derivation (Clifford & Bostock 2007): L. -icum, belonging to. From River Tanais, now Don, Russia.


Fertile Spikelets. Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–12 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 3–7 mm long, 1 length of upper glume, coriaceous, 1-keeled, keeled all along, 1 -veined. Lower glume primary vein eciliate or ciliate. Lower glume lateral veins absent. Lower glume apex acumin
muticous. Upper glume lanceolate, 5–7 mm long, 0.5 length of adjacent fertile lemma, coriaceous, 1-keeled, keeled all along, 1 -veined. Upper glume primary vein eciliate or ciliate. Upper glume lateral veins absent. Upper glume apex acuminate, muticous.

**Florets.** Fertile lemma elliptic, 6–8 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma surface pubescent or pilose. Lemma apex acute. Palea keels ciliate, with 1–10 enations per keel. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 4.5–5 mm long. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, oblong, sulcate on hilar side, hairy at apex, apex fleshy. Embryo 0.2 length of caryopsis. Hilum linear, 1 length of caryopsis.

2n = 28 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe.

Region. Eastern Europe.

Country /Province /State. Central European Russia, East European Russia, South European Russia, Northwest European Russia.


Accepted by: N.L.Bor, *Grasses of Burma, Ceylon, India & Pakistan* (1960).


Illustrations: None found.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Distribution (TDWG).** Continent. Tropical Asia.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): resembling *Lolium* with respect to the inflorescence.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, bilateral, 8–26 cm long. Rhachis fragile at the nodes, semiterete. Spikelet packing broadside to rhachis, lax. Spikelets appressed, solitary, Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 3–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, falling entire, deciduous with accessory branch structures, readily shedding fertile florets. Rhachilla internodes 1–1.7 mm long.

**Glumes.** Glumes collateral, similar, shorter than spikelet, firmer than fertile lemma. Lower glume oblong, 4.5–7 mm long, 1 length of upper glume, coriaceous, without keels, 5 -veined. Lower glume lateral veins ribbed. Lower glume apex obtuse. Upper glume oblong, 4.5–7 mm long, 1–1.4 length of adjacent fertile lemma, coriaceous, without keels, 5 -veined. Upper glume lateral veins ribbed. Upper glume apex obtuse.

**Florets.** Fertile florets with the lowest dissimilar (1–3 veined). Fertile lemma elliptic, 4.5–5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex obtuse. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 3, 3 mm long. Ovary glabrous. Caryopsis with adherent pericarp, oblong, dorsally compressed, 2–3 mm long. Hilum elliptic.

**Distribution (TDWG).** Continent. Africa.

Country /Province /State. Northern Africa. Algeria, Tunisia.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2.5–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.5 length of lemma.


Fertiles. Fertile lemma oblong or ovate, 1.6–2.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, truncate, muticus or awned, 1 -awned. Principal lemma awn subapical, straight, 0.5–1 mm long overall. Palea 0.25 length of lemma, hyaline, 2 -veined.


Distribution (TDWG). Continent: Europe.

Region. Middle Europe, Southwestern Europe, Southeastern Europe.

Country /Province /State. : Austria, Germany, Switzerland. : France. : Italy, Yugoslavia.


TYPE from Germany. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Balkans.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. alpes, high mountain; -ina, belonging to. Species growing at high altitudes.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 10–40 cm long. Culm-internodes smooth. Lateral branches lacking. Leaf-sheaths without keel, smooth, glabrous on surface. Ligule an eciliate membrane, 3–4 mm long, acute. Leaf-blades filiform, conduplicate or involute, 6–12 cm long, 0.3–0.4 mm wide, mid-green or glaucous. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade apex acute, callose.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.6 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 4–5 mm long, 1.2 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 3.5–4.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 4 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface scaberulous. Lemma apex dentate, 2 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 7–9 mm long overall, with twisted column. Palea 1 mm long, 0.25 length of lemma, hyaline.


*2n = 14* (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa.

**Region.** Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.

**Country /Province /State.** : Austria, Czechoslovakia, Germany, Poland, Switzerland. : France, Spain. : Italy, Romania, Yugoslavia. Northwest European Russia, Ukraine. **Northern Africa**. Morocco.


**TYPE** from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Argentina, Sierra de Ambato: Hunziker 20880.


**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Serra de Ambato, Catamarea Province, Argentina.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Culms 3–5 cm long, 1 -noded. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.2 –0.3 mm long, erose. Leaf-blades flat or conduplicate, 1–2 cm long, 0.5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence a panicle, comprising 7–9 fertile spikelets. Panicle open, oblong, 1–2 cm long, bearing few spikelets. Primary panicle branches 3–6 in number. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.4–1.5 mm long, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.8–2.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 2–2.2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.8–2.1 mm long, 1.5–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.2–1.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 0.6–1 mm long overall, not or scarcely exerted from spikelet. Palea 0.2 mm long, hyaline, 0 -veined.

**Flower and Fruit.** Lodicules 2, 0.2 mm long, membranous. Anthers 3. Caryopsis with adherent pericarp, ellipsoid, 1 mm long. Hilum linear.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Southern South America. Argentina Northwest. Catamarca.
Agrostis anadyrensis Soczewa. Flora URSS 2: 176, t. 13, f. 8 a-d, 746. 1934.


TYPE from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Belaya R. basin, Bitcho hills: Sochava (LE holo).


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 35–40 cm long. Ligule an eciliate membrane, 2–3.5 mm long, obtuse. Leaf-blades 10 cm long, 3–4 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


Florets. Fertile lemma oblong, 1.5–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 2–2.5 mm long overall, with twisted column. Palea hyaline.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.6–0.7 mm long. Caryopsis with adherent pericarp. Hilum linear.

2n = 56 (1 ref TROPICOS).


Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 20–30 cm long, 1–2 -noded. Culm-internodes smooth. Leaf-sheaths 4–6 cm long, smooth. Ligule an eciliate membrane, 2 mm long, pubescent on abaxial surface, lacerate. Leaf-blades 2.5–4 cm long, 2–2.5 mm wide. Leaf-blade surface scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, linear or lanceolate, 3–7 cm long, 1–1.5 cm wide. Primary panicle branches appressed, 1–4 -nate, 0.5–1.8 cm long. Panicule branches with occasional prickles. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.2 mm long, breaking up at
maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.5 length of lemma.

**Glumes.** Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2–2.2 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface smooth or asperulous, rough above. Lower glume apex acute. Upper glume lanceolate, 2–2.2 mm long, 1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface smooth or asperulous, rough above. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 2–2.2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface puberulous. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight or curved, 3–3.5 mm long overall. Palea 1.5 mm long, 0.75 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.2 mm long. Caryopsis with adherent pericarp, ovoid, 1.5 mm long. Hilum linear.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** Middle Asia. Kirgizistan.


**Illustrations (Books):** C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (240), C-C Hsu,Taiwan Grasses (1975) (399, Pl. 1375), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 467).

**Derivation** (Clifford & Bostock 2007): *L. mons*, mountain; *-ana*, indicating connection. From Mt. Arisan, Taiwan.

**Classification.** Subfamily Pooideae. Tribe: Poecae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms geniculately ascending, 40–100 cm long, 1–1.7 mm diam., 3–6 -noded, rooting from lower nodes. Leaf-sheaths smooth. Ligule an eciliate membrane, 2–3.5 mm long, scaberulous on ab axial surface, obtuse. Leaf-blades 5–14 cm long, 2–6 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate or oblong, 10–20 cm long. Primary panicle branches ascending or spreading, 3 -nate, 5–8 cm long, bearing spikelets almost to the base. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicles present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 1.9–2.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


**Florets.** Fertile lemma oblong or ovate, 1.4–1.7 mm long, hyaline, without keel, 4–5 -veined, more than 3-veined. Lemma apex erose, obtuse, muticous. Palea 0.35–0.75 mm long, 0.2–0.4 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Anthers 3, 0.5–0.8 mm long.

**Distribution (TDWG). Continent.** Temperate Asia.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. arista, bristle; gluma, husk. With awned subtending glumes or lemmas.


Habit, Vegetative Morphology. Annual. Culms erect, 5–15 cm long. Leaf-sheaths longer than adjacent culm internode. Ligule an eciliate membrane, 2–2.5 mm long. Leaf-blades 1.5–6 cm long, 0.5–2.3 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, 3–6 cm long, 0.5–0.8 cm wide. Primary panicle branches appressed, 0.5–2 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.15 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 3.5–4 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acuminata, awned, 1 -awned, awn 1–2 mm long. Upper glume elliptic, 3.5–4 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume surface asperulous. Upper glume apex acuminata, awned, 1 -awned, awn 1–2 mm long.

Florets. Fertile lemma oblong, 3.2–3.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.6 way up back of lemma, geniculate, 6–7 mm long overall, with twisted column. Palea 0.3 length of lemma, hyaline, 0 -veined, without keels.


Country /Province /State. Southwestern USA. California.

Agrostis arvensis Phil. Linnaea 29: 87. (1858).


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes elongated. Culms geniculately ascending, slender, 35–50 cm long, 2–3 -noded. Culm-internodes distally glabrous. Lateral branches lacking. Leaves cauline. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.4–1 mm long, erose, obtuse. Leaf-blades 4–8 cm long, 0.5–0.6 mm wide. Leaf-blade surface smooth.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 5–9 cm long, 0.3–0.5 cm wide. Primary panicle branches appressed. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–3 mm long, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.1–2.5 mm long, breaking up at
maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume
lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous.
Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.1–2.5 mm long,
Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.4–1.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined.
Lemma apex erose, truncate, muticous. Palea 0.5–0.6 mm long, 0.33 length of lemma, 0 -veined.

**Flower and Fruit.** Lodicules 2, 0.3 mm long, membranous. Anthers 3, 1.1–1.3 mm long. Caryopsis
with adherent pericarp. Endosperm farinose.

**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Southern South America. Chile Central.
Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Biobio.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.
**TYPE** from Morocco. T:<Type of Basionym>: fide
TROPICOS and Kew Synonomy Database:
Morocco, Reraya: Litardiere & Maire ; Morocco, Ourika: Maire.

**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** from the Atlantic coast of North Africa.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 10–40 cm long. Culm-internodes
smooth. Leaf-sheaths without keel, smooth, glabrous on surface. Ligule an eciliate membrane, 2–3 mm
long, erose or lacerate, obtuse. Leaf-blades conduplicate, 3–7 cm long, 1–1.3 cm wide. Leaf-blade
venation with 7–9 secondary veins, 3–5 inner ridges. Leaf-blade surface scabrous, rough adaxially,
glabrous. Leaf-blade margins scabrous. Leaf-blade apex obtuse or abruptly acute.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, 4–7 cm long. Primary panicle branches
ascending or spreading, 4–6 -nate. Panicle axis smooth. Panicle branches capillary, smooth or scaberulous.
Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, smooth or scaberulous, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1
fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.5 mm long, breaking up at
maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.25 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping.
Lower glume oblong, 2–2.75 mm long, 1.2 length of upper glume, membranous, purple, 1-keeled, 1 -veined.
Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper
glume oblong, 1.75–2.5 mm long, 1.2 length of adjacent fertile lemma, membranous, purple, hkeeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume
apex acute.

**Florets.** Fertile lemma oblong, 1.6–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined.
Lemma lateral veins excurrent (0.3mm). Lemma surface pilose. Lemma apex dentate, 2 -fid, truncate or
obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.35–0.5 way up back of lemma, geniculate,
2–3 mm long overall, with twisted column. Palea 0.25–0.33 length of lemma, hyaline.

**Flower and Fruit.** Lodicules absent. Anthers 3, 1.5–2 mm long, yellow. Caryopsis with adherent
pericarp, oblong, sulcate on hilar side, 1–1.2 mm long. Embryo 0.25–0.33 length of caryopsis. Hilum
epistomatic.

\[ n = 7 \ (1 \text{ ref TROPICOS}) \]

\[ 2n = 14 \ (1 \text{ ref TROPICOS}) \]

**Distribution (TDWG).** Continent. Africa.
**Country /Province /State.** Northern Africa. Morocco.

**Agrostis australiensis** Mez. *Fedde, Repert.* 17: 302 (1921).

**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, D.Sharp, D. & B.K.Simon,


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *bacillus*, rod; *-ata*, possessing. The rhachilla projects beyond the floret.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms 10–30 cm long, 0.2–0.3 mm diam., 1–2-noded. Culm-nodes purple. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 1.7–4.3 mm long, acuminate. Leaf-blades filiform, conduplicate, 2–15 cm long, 0.2–0.8 mm wide. Leaf-blade surface ribbed, scaberulous, rough abaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 1.8–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume oblong, 1.8–2 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 3 -veined. Lower glume primary vein scaberulous. Lower glume apex acute. Upper glume oblong, 1.8–2 mm long, 1.1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 1.6–1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, obtuse, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 0.3–0.6 mm long overall. Palea 1.1–1.4 mm long, 0.66–0.75 length of lemma, hyaline. Rhachilla extension 1.1–1.4 mm long.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.8–1 mm long. Caryopsis with adherent pericarp. Hilum linear. 2n = 28 (2 refs TROPICOS).


**TYPE** from Turkey. **Basionym or Replaced Name:** *Calamagrostis balansae* Boiss., *Fl. Orient.* 5: 522 (1884). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Turkey, Ponto Lazico: Balansa (G syn) ; Turkey, Khabackar: Balansa sn (G syn).

**Illustrations:** None found.


**Classification.** Subfamily Pooidae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms erect or geniculately ascending, 28–75 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 3–4.5 mm long, obtuse. Leaf-blades 4–27 cm long, 3–6 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 5.5–15 cm long, 1.5–3 cm wide. Primary panicle branches appressed, 2.5–5 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 1–3 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.7–1 mm long, 0.4 length of lemma.


**Florets.** Fertile lemma oblong, 2–2.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous or pubescent. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 3.2–4 mm long overall, with twisted column. Palea 0.33 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.2–1.4 mm long. Stigmas 2, laterally exerted. Caryopsis with adherent pericarp, 1.3–1.6 mm long. Hilum linear. Endosperm farinose.


**TYPE** from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: ST: *Buchman 24*, Mar 1883, South Africa: King Williamstown Division, Amatola Mountains (K (photo, SI)). ST: *MacOwan 2189*, Mar 1874, South Africa: Central Region, Somerset Division, on the higher rocks of Bosch Berg, 4300 ft (K (photo, SI)).

**Illustrations**: None found.

**Derivation** (Clifford & Bostock 2007): *L. barba*, beard; -ula, diminutive; *gero*, carry or bear. Rachilla extended into a scaberulous bristle.

**Classification**. Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets**. Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes**. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3–5.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3–5.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets**. Fertile lemma oblong, 2.7–5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface pubescent or pilose, hairy all along or below. Lemma apex dentate, 4 -fid, truncate, awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 3–6 mm long overall, with twisted column. Palea 0.75 length of lemma, hyaline, 2 -veined. Palea apex with excurrent keel veins. Rachilla extension 0.2 mm long, 0.05 length of fertile floret, pilose, hairy at tip.


n = 14, or 28 (1 ref TROPICOS).

**Distribution (TDWG)**. Continent. Africa.

**Country /Province /State. Southern Africa**. Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Eastern Cape.


**Accepted by**: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations**: None found.


**Classification**. Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology**. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 10–40 cm long, 2 -noded. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, keeled, smooth, glabrous on surface. Ligule an eciliate membrane, 1.7–2 mm long, erose, truncate or acute. Leaf-blades filiform, conduplicate, 2–18 cm long, 0.2–0.5 mm wide.

**Inflorescence**. Inflorescence a panicle. Panicle open, lanceolate, 2.5–8 cm long, 0.5–1 cm wide. Primary panicle branches appressed, 1–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets**. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.7–3.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2.7–3.1 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.5–3.2 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.8–2.1 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2–0.25 way up back of lemma, geniculate, 3.7–4.2 mm long overall, with twisted column. Palea orbicular, 0.5–0.8 mm long, 0.25–0.33 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, 0.4–0.6 mm long, membranous. Anthers 3, 0.7–1.2 mm long. Caryopsis with adherent pericarp, 1.7–1.9 mm long.

**Distribution (TDWG). Continent.** Europe.
**Region.** Southwestern Europe.
**Country /Province /State.** Baleares.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *basis*, base; -alis, pertaining to. Lemma awned from near the base.


Habit, Vegetative Morphology. Perennial, caespitose. Culms slender, 45 cm long. Culm-internodes smooth. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 4 mm long, scaberulous on abaxial surface, obtuse. Leaf-blades flat or involute, 5–8 cm long, 2 mm wide. Leaf-blade surface scabrous. Leaf-blade apex acuminate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous or sparsely hairy.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3–3.5 mm long, 1.1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 2.8–3 mm long, 1.6 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 1.8–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 3–3.5 mm long overall, with twisted column. Palea absent or minute.


Distribution (TDWG). Continent. South America.


**TYPE** from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: T?: Ecklon 242, Cape (“Table mountain”) (S-G246).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Karl Heinrich Bergius (1790–1818) German naturalist and apothecary who collected at Cape Town, South Africa.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual or perennial, short-lived. Culms weak, 15–30 cm long. Ligule an eciliate membrane. Leaf-blades 2–9 cm long, 1–2 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.5–2.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.5–2.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.5–2.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex dentate, 4 -fid, truncate, muticous or awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight or curved, 0–2 mm long overall, without a column. Palea 0.9 length of lemma, hyaline, 2 -veined.


**Distribution (TDWG).** Continent: Africa.

**Country /Province /State.** Southern Africa, Middle Atlantic Ocean. Mpumalanga, Free State, Kwazulu-Natal, Lesotho, Western Cape. St Helena.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Rhizomes absent or short. Culms erect or geniculately ascending, 50–90 cm long, 4 -noded. Leaf-sheaths smooth or scaberulous. Ligule an eciliate membrane, 2–5 mm long, erose. Leaf-blades flat or involute, 1.5–4 mm wide. Leaf-blade surface ribbed, grooved adaxially. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate or ovate, loose, 10–35 cm long, with spikelets clustered towards branch tips. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 2–2.5 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -
veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2–2.5 mm long, 1.2–2.6 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma oblong, 1.25–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex emarginate or truncate, muticous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 0.8 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Queensland, New South Wales. Tablelands.

### Agrostis blasdalei


**Derivation** (Clifford & Bostock 2007): in honor of Walter Charles Blasdale (1871-) United States amateur botanist and chemist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms geniculately ascending or decumbent, 10–15 cm long, 2–3 -noded. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades filiform, conduplicate or involute, 2–4 cm long, 0.5 mm wide. Leaf-blade surface glabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


**Florets.** Fertile lemma elliptic, 1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 1 mm long overall. Palea 0.3 mm long, 0.1–0.2 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.75–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southwestern USA. California.

### Agrostis boliviana


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Bolivia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: ST: Fiebrig 2821, Bolivia: Pinos bei Tarija (B; IST: BAA, US-1127226 (fragm. ex B)).

**ST:** Fiebrig 2905, Bolivia: Calderillo (B; IST: BAA, US-1127227 (fragm. ex B)).

**Illustrations:** None found.
Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Bolivia.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 25–75 cm long. Ligule an eciliate membrane, 4–5 mm long. Leaf-blades involute, 2–3 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 10–15 cm long. Primary panicle branches ascending or spreading, whorled at most nodes. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


Florets. Fertile lemma elliptic, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 2.5 mm long overall, with twisted column. Palea absent or minute.


Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Bolivia, Peru.


Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, slender, 30 cm long, 1–2 -noded. Culm-internodes smooth or scaberulous. Culm-nodes glabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 3 mm long, lacerate, obtuse. Leaf-blades filiform or linear, 5–10 cm long, 1–1.5 mm wide. Leaf-blade surface scabrous. Leaf-blade apex acuminate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


Florets. Fertile lemma lanceolate, 1.6 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex truncate, awned, 1 -awned. Principal lemma
awn dorsal, arising 0.5 way up back of lemma, geniculate, 3–4 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.3 mm long. Caryopsis with adherent pericarp, ellipsoid. Hilum linear.


**TYPE** from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: *Bourgeau* 682, 1865, Mexico: Mexico (P; IT: US-556238 (fragm. ex P)).

**Recent Synonyms:** *Agrostis thyrsigera* Mez, *Fedde, Repert.* 17: 301 (1921).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms geniculately ascending, 20–60 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2–5 mm long. Leaf-blades 3–7 cm long, 1–3 mm wide. Leaf-blade surface scabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


**Florets.** Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex muticous. Palea 0.25–0.33 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.75–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ensis. From Department of Boyaca, Colombia.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 6–22 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths longer than adjacent culm internode,
smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, 1.5–2 mm long, acute. Leaf-blades erect, flat or convolute, 3–5 cm long, 1.5–2 mm wide. Leaf-blade venation prominent. Leaf-blade surface scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 3–5 cm long. Primary panicle branches appressed or ascending, 1.5 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5 mm long, breaking up at maturity, disarticulating below each fertile floret.


**Florets.** Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex obtuse, muticous. Palea absent or minute.

**Flower and Fruit.** Lodicles 2, 0.7 mm long, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia.

### Agrostis brachiata


**TYPE** from Nepal. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Nepal:,

Wallich 3769C (HT: K; IT: K-W, E).


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 465).

**Derivation** (Clifford & Bostock 2007): L. *brachium*, forearm; -atum, possessing. Inflorescence a single axis bearing racemes often held in a manner suggesting the arms of a signalling station.

**Classification.** Subfamily Pooideae. Tribe: Poeeae.

**Habit, Vegetative Morphology.** Perennial. Culms decumbent, slender, 60–100 cm long. Ligule an eciliate membrane. Leaf-blades 5–15 cm long, 2–6 mm wide, flaccid. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma. Lower glume elliptic, 1.5 mm long, 1 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.5 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, muticous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 0.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.

**Country /Province /State.** China South Central, China North-Central. Indian Subcontinent. Eastern Himalaya, India, Nepal.


**Derivation** (Clifford & Bostock 2007): Gk. brachys, short; ather, ear or spike of wheat. Spikelet with a minute rachilla projection or lemma with a short awn.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–50 cm long. Leaf-sheaths smooth or scaberulous. Ligule an eciliate membrane, 2 mm long, erose, obtuse. Leaf-blades flat or convolute, 1–2 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.9–3.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, dark green, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute.

**Florets.** Fertile lemma elliptic, 1.8–2.2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 1.2–2 mm long overall. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.75–0.8 mm long. Caryopsis with adherent pericarp, fusiform, 1.5 mm long. Hilum linear.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Southern South America. Argentina South, Chile Central, Chile South. Tierra del Fuego. Rest of Chile- Biobio, La Auracania, Maule, O’Higgins, Santado, Valpariso, Chiloe, Aisen, Magellanes. Maule, Biobio. Aisen, Magellanes.


. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: IT: T. Haenke s.n., Peru (LE-TRIN-1627.01 (fragm. & fig.)).

HT: T. Haenke s.n., Peru (PR; IT: MO-2104691, MO-2104692 (illustration)).


**Classification.** Subfamily Pooideae. Tribe: Poeae.
**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 4–10 cm long. Culm-internodes distally glabrous. Ligule an eciliate membrane. Leaf-blades involute, 1–3 cm long, 1–1.3 mm wide. Leaf-blade surface glabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret.


**Florets.** Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, muticous. Palea absent or minute.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Southern South America. Bolivia, Colombia, Ecuador, Peru. Chile Central.

Catamarca, Salta, Cordoba. Coquimbo, Santiago, Biobio, La Araucania.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3–4.5 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3–4.5 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2–2.5 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lesson lateral veins excurrent. Lemma margins ciliate. Lemma apex awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 5 mm long overall, with twisted column. Palea 2 mm long, 0.8–1 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.3–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 15–38 cm long. Lateral branches lacking. Leaf-sheaths antorsely scabrous. Ligule an eciliate membrane, 1.5–4 mm long. Leaf-blades filiform, involute, 2–10 cm long, 1–2 mm wide. Leaf-blade surface scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, loose, 5–10 cm long, 2–9 cm wide. Primary panicle branches ascending, branching divaricately, rebranched at middle, 2–5 cm long. Panicle branches flexuous, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 2.5–3.5 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.5–3.5 mm long, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex obtuse, muticous. Palea 0.7–1 mm long, 0.33 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, 0.7 mm long, membranous. Anthers 3, 0.5–0.7 mm long. Caryopsis with adherent pericarp. Hilum linear.


**Derivation** (Clifford & Bostock 2007): L. *canus*, greyish-white; -inus, belonging to. Foliage or inflorescences grey-green.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or elongated. Stolons present. Culms geniculately ascending or decumbent or prostrate, 15–75 cm long, 1–4 -noded, without nodal roots or rooting from lower nodes. Culm-internodes smooth. Leaf-sheaths without keel, smooth or scaberulous. Ligule an eciliate membrane, 1–5 mm long, acute. Leaf-blades flat or convolute, 2–15 cm long, 1–3 mm wide. Leaf-blade surface ribbed, scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, lanceolate or ovate, 2–10 cm long, 1–7 cm wide. Primary panicle branches whorled at most nodes. Panicle branches capillary, terete, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 1–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret calyx pubescent.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 1.7–3.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret calyx pubescent.

**Florets.** Fertile lemma oblong or ovate, 1.1–2.1 mm long, hyaline, without keel, 4–5 -veined, more than 3-veined. Lemma apex truncate, muticus or awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 2–4.5 mm long overall, with twisted column. Palea oblong, 0.1–0.25 length of lemma, hyaline, 2 -veined. Palea apex obtuse.

**Flower and Fruit.** Lodicules 2, lanceolate, membranous. Anthers 3, 1–1.5 mm long. Stigmas 2, laterally exserted. Caryopsis with adherent pericarp, ellipsoid, isodiometric, biconvex, estipitate, without sulcus, smooth, apex unappendaged. Embryo 0.2 length of caryopsis. Hilum linear, 0.9 length of caryopsis. Endosperm farinose.

\[ n = 14 \text{ (1 ref TROPICOS), or 21 (1 ref TROPICOS).} \]
\[ 2n = 14 \text{ (5 refs TROPICOS), or 28 (2 refs TROPICOS).} \]

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Tropical Asia, Pacific, North America (*), South America, Antarctica.

**Region.** Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


**Agrostis capillaris** L. Sp.Pl. 62 (1753).


**Derivation** (Clifford & Bostock 2007): *l. capillaris*, a hair; -are, pertaining to. Inflorescence with filiform branches.

**Classification.** Subfamily Pooidaeae. Tribe: Poeeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Stolons absent or present. Culms erect or geniculately ascending, 10–70 cm long, 2–5-noded. Culm-internodes smooth. Leaf-sheaths without keel, smooth. Ligule an eciliate membrane, 0.5–2 mm long (shorter than wide), truncate. Leaf-blades 1–15 cm long, 1–5 mm wide. Leaf-blade surface ribbed, smooth or scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong to ovate, 1–20 cm long, 1–12 cm wide. Primary panicle branches whorled at lower nodes. Panicle branches capillary, terete, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 1–3 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma elliptic to oblong, 1.2–2.7 mm long, hyaline, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma apex truncate. Palea oblong, 0.5–0.7 length of lemma, hyaline, 2 -veined. Palea apex obtuse.

**Flower and Fruit.** Lodices 2, lanceolate, membranous. Anthers 3, 1–1.5 mm long. Stigmas 2, laterally exserted. Caryopsis with adherent pericarp, ellipsoid, isodiametric, biconvex, estipitate, without sulcus, 1 mm long, smooth, apex unappendaged. Embryo 0.2 length of caryopsis. Hilum linear, 0.9 length of caryopsis. Endosperm farinose.

2n = 28 (7 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America (*), South America, Antarctica.

**Region.** Northern Europe. Middle Europe. Southwestern Europe, Southeastern Europe, Eastern Europe.


Agrostis carmichaelii Roem. & Schult. Mant. 3: 571 (1827).

Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

TYPE from Tristan da Cunha. Basis or Replaced Name: Agrostis ramulosa Carm., non (Kunth)Roem. & Schult.(1817), Trans. Linn. Soc. 12: 504 (1818). T:<Type of Basis or Name>: fide TROPICOS and Kew Synonomy Database: Based on A. ramulosa Carm. ; Tristan da Cunha: Coll??.

Illustrations: None found.


Habit, Vegetative Morphology. Perennial, cushion forming, clumped densely. Culms 4–7(–12) cm long. Ligule an eciliate membrane, 1 mm long, acute. Leaf-blades filiform, convolute, 2–4 cm long, 0.5 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, shorter than basal leaves, embraced at base by subtending leaf. Panicle open, linear or oblong, 1–1.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Fertile models. Fertile lemma oblong, 1 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, muticous. Palea 0.33 length of lemma, hyaline.

Distribution (TDWG). Continent. Antarctica.

Country /Province /State. Subantarctic islands. Tristan de Cunha.


Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From the Spanish Provinces of New and Old Castille.


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect or geniculately ascending, 18–50 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–3.5 mm long. Leaf-blades involute, 2.5–10 cm long, 0.5–1.8 mm wide. Leaf-blade surface smooth or scabrous.
**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, effuse, 5–15 cm long, 0.8–6 cm wide. Primary panicle branches spreading, 4–8 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 1–2.3 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension or with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.3–3.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Flowers.** Fertile lemma oblong, 1.6–1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex erose, truncate, muticous. Palea 0.5 length of lemma, hyaline, 2 -veined. Rachilla extension pilose.

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Australasia, South America, Antarctica.


**Type** from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Kamchatka: Fischer 46 (LE holo).


**Derivation** (Clifford & Bostock 2007): L. *clava*, club; ata, possessing. Possibly a reference to the obtuse lemma.

**Classification.** Subfamily Pooideae. Tribe: Poae.

**Habit, Vegetative Morphology.** Annual, caespitose. Basal innovations intravaginal. Culms erect or geniculately ascending, 30–70 cm long, 2–3 -noded. Culm-internodes smooth. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 1.5–3 mm long, obtuse or acute. Leaf-blades 9–18 cm long, 2–7 mm wide, dark green. Leaf-blade venation with 10–30 secondary veins. Leaf-blade surface scabrous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, effuse, 8–25 cm long, 0.25–0.33 of culm length, bearing few spikelets. Primary panicle branches spreading, whorled at lower nodes, rebranched above middle, 4.6–7.5 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 1.6–2.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1.6–2.8 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Upper glume lanceolate, 1.6–2.8 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acuminately rounded.

**Florets.** Fertile lemma oblong, 1.3–1.9 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma surface smooth. Lemma apex dentate, obtuse, muticous. Palea present or absent or minute, 0.2–0.5 mm long, 0-0.25 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.3–0.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

\[2n = 42 \text{ (2 refs TROPICOS).}\]

**Distribution (TDWG).** Continent: Europe, Temperate Asia, Tropical Asia, North America.

**Region.** Northern Europe, Eastern Europe.


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online, J.F.Veldkamp, Poaceae ms (Flora Malesiana).

**TYPE** from Indonesia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Clemens 30438; 7–9 Sep 1932, Indonesia: Java: G. Gede, under the structure at the summit, 10000 ft, forest, leaves and stem rigid (K).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicule. Panicle contracted, linear, 4–9 cm long, 0.6–1.5 cm wide. Primary panicle branches appressed, naked below or bearing spikelets almost to the base. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 1.65–1.85 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume elliptic, 1.65–1.85 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1.4–1.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.5–1.6 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure, extending close to apex. Lemma apex entire, acute, muticous. Palea 0.5 mm long, 0.33 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.8–0.9 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent: Tropical Asia.

**Country /Province /State.** Malesia. Java.


**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 50 cm long, 2 -noded. Culm-internodes distally glabrous. Leaf-sheaths striately veined, glabrous on surface. Ligule an eciliate membrane, 4 mm long. Leaf-blades erect, 10–20 cm long, 1.5 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 11–15 cm long, 0.5–1 cm wide. Primary panicle branches 3 cm long. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–3 mm long, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.4 mm long, 0.17 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 4 mm long, 1.1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3.7 mm long, 1.5 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 2.4 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface puberulous. Lemma apex dentate, truncate, awned, 2 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight or curved, 4 mm long overall. Palea 1.8 mm long, 0.75 length of lemma, hyaline.

**Distribution (TDWG).** Continent: Africa.

Country /Province /State: Western Indian Ocean. Comoros.


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online, T.G.Tutin et al, Flora Europaea 5 (1980).

**TYPE** from Azores. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Based on Deyeuxia caespitosa ; Azores, Pico: Hochstetter 188 (K iso).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms geniculately ascending, 5–35 cm long. Culm-internodes smooth or scaberulous. Ligule an eciliate membrane, 0.5–5 mm long. Leaf-blades flat or involute, 1–10 cm long, 0.5–4 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous or sparsely hairy. Floret callus hairs 0–0.3 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scaberulous. Lower glume lateral veins absent. Lower glume apex acute, muticous or mucronate. Upper glume lanceolate, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute, muticous or mucronate.
Florets. Fertile lemma elliptic to oblong, 1.3–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins prominent, excurrent or extending close to apex. Lemma surface smooth or scaberulous, glabrous or pubescent. Lemma apex obtuse, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, geniculate, 2–4 mm long overall, with twisted column. Palea 0.6–0.8 length of lemma, hyaline, 2 -veined.

Flower and Fruit. Lodicules 2, lanceolate, membranous. Anthers 3, 0.6–1 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.


Region. Southwestern Europe.


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2 mm long.


Florets. Fertile lemma elliptic, 1.5–1.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, geniculate, 3 mm long overall, with twisted column. Palea 0.3 mm long, 0.2 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, oblong, 0.6 mm long. Caryopsis with adherent pericarp. Hilum linear.


Yunnan.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 10–60 cm long, 2–3 -noded. Culm-internodes scaberulous. Leaf-sheaths without keel, scaberulous. Ligule an eciliate membrane, 2–4 mm long, acute. Leaf-blades filiform, conduplicate, 5–20 cm long, 0.2–0.3 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle contracted, lanceolate, 3–10 cm long, 0.5–1.5 cm wide. Panicle branches terete, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 1–4 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret calyx pubescent.


Florets. Fertile lemma oblong or ovate, 2–2.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 4–5 mm long overall, with twisted column. Pala oblong, 0.1–0.25 length of lemma, hyaline, 2 -veined. Pala apex obtuse.

Flower and Fruit. Lodicules 2, lanceolate, membranous. Anthers 3, 1.5–2 mm long. Stigmas 2, laterally exserted. Caryopsis with adherent pericarp, ellipsoid, isodiametric, biconvex, estipitate, without sulcus, 1.5 mm long, smooth, apex unappendaged. Embryo 0.2 length of caryopsis. Hilum linear, 0.9 length of caryopsis. Endosperm farinose.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -cola, dweller. From Cyprus.


Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear or lanceolate or oblong, dense, 5 cm long, 1.5–2 cm wide. Primary panicle branches whorled at most nodes, 1–1.5 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret.


Florets. Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, mucronate. Pala oblong, 1 mm long, 0.66 length of lemma, hyaline, 2 -veined.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -cola, dweller. From Cyprus.


Country /Province /State. Western Asia. Cyprus.

Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.
Illustrations: None found.
Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 80–100 cm long. Culm-internodes distally glabrous. Leaf-sheaths striatel y veined, smooth, glabrous on surface. Ligule an ecilicate membrane, 3 mm long. Leaf-blades 12 cm long, 4 mm wide. Leaf-blade surface scabrous, rough adaxially.
Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.15 length of lemma.
Florets. Fertile lemma oblong, 2.5–3 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma surface pilose. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 4 mm long overall, without a column. Palea 2 mm long, hyaline.
Country /Province /State. Western Indian Ocean. Madagascar.

Illustrations: None found.
Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 20–40 cm long. Ligule an ecilicate membrane, acute. Leaf-blades involute, 3–10 cm long, 1–3.5 mm wide, glaucous.
Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Florets. Fertile lemma elliptic, 0.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex lobed, 5 -fid, incised 0.15 of lemma length, truncate, muticous. Palea 0.5 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.

Region. Southwestern Europe.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–30 cm long. Ligule an eciliate membrane, 2–4 mm long, obtuse. Leaf-blades 4–11 cm long, 1–2 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 4–5 mm long, 1 length of upper glume, membranous, 1-keeled. Lower glume apex acuminate. Upper glume lanceolate, 4–5 mm long, membranous, 1-keeled. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, curved, 2–3 mm long overall. Palea 0.66 length of lemma, hyaline.


Distribution (TDWG). Continent. Antarctica.

Country /Province /State. Subantarctic islands. Amsterdam-St Paul Is.


pubescent on abaxial surface, truncate. Leaf-blades 5–10 cm long, 3–5 mm wide. Leaf-blade surface ribbed, scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, continuous or interrupted, 2–8 cm long, 0.5–1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret calyx glabrous.


**Florets.** Fertile lemma elliptic, 2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex dentate, 4 -fid, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, straight, 0–2 mm long overall. Palea 0.25–0.33 length of lemma, hyaline.

**Flower and Fruit.** Lodices 2, membranous. Anthers 3, 0.75–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southwestern USA. California.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to. from Tasmania, formerly Van deiman's Land.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms erect, 15–35 cm long. Culm-internodes smooth. Leaf-sheaths loose, ribbed. Ligule an eciliate membrane, 1–3 mm long, entire or erose, obtuse. Leaf-blades 6–12 cm long, 1–2 mm wide. Leaf-blade surface smooth or scaberulous, rough on both sides.

**Inflorescence.** Inflorescence a panicle, embraced at base by subtending leaf. Peduncle smooth or scaberulous above. Panicle open, pyramidal, 5–10 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading, 2 -nate (upper nodes), whorled at lower nodes. Panicle branches stiff. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret calyx pubescent.

**Glumes.** Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 2–3 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.75–2.75 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure or distinct. Lemma apex muticous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 0.5–1.6 mm long. Caryopsis with adherent pericarp, 1.25 mm long.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Tasmania.

**Accepted by:** U.Quattrocchi, CRC World Dictionary of Grasses (2006).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms geniculately ascending, slender, 40–100 cm long. Ligule an eciliate membrane. Leaf-blades 2–4 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic or ovate, effuse, 15–30 cm long, 8–17 cm wide. Primary panicle branches branching divaricately. Panicle branches capillary, flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3.3–4.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 3.3–4.8 mm long, 1.2 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scaberulous. Lower glume surface smooth or asperulous. Lower glume apex acuminate. Upper glume elliptic or oblong, 2.8–4 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume surface smooth or asperulous. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate or oblong, 2.6–3.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent (0.3–0.6mm). Lemma surface pilose. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 4.2–6 mm long overall, with twisted column. Palea 0.5–0.75 length of lemma, hyaline, 2 -veined. Rhachilla extension 0.2–2 mm long, pilose.


**Distribution (TDWG).** Continent: Africa.

**Country /Province /State.** Northeast Tropical Africa. Ethiopia (inc. Eritrea).


**Illustrations (Books):** S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 458).

**Derivation** (Clifford & Bostock 2007): L. divarico, spread out; -issima, most. Panicle, large and diffuse.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50 cm long. Ligule an eciliate membrane. Leaf-blades 8–10 cm long, 2–3.5 mm wide.

**Inflorescence.** Inflorescence a panicle. Peduncle smooth. Panicle open, ovate, 20 cm long, 10 cm wide. Primary panicle branches spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Florets. Fertile lemma ovate, 1.2–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex truncate, muticous. Palea 0.5 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, 0.2 mm long, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.


Heilongjiang, or Jilin, or Liaoning.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 458).


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3–4 mm long, 1 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume lanceolate, 3–4 mm long, 1.5–1.6 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent or obscure. Upper glume apex acute.

Florets. Fertile lemma elliptic, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.3–0.4 way up back of lemma, straight or geniculate, 3–4.3 mm long overall, without a column or with twisted column. Palea 0.5 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.7–0.9 mm long. Caryopsis with adherent pericarp. Hilum linear.


Country /Province /State. Middle Asia, China. Kazakhstan. Xinjiang.


Illustrations: None found.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 20–40 cm long. Ligule an eciliate membrane, truncate. Leaf-blades flat, 3–10 cm long, 1–3.5 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.7 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 1.7 mm long, 2–3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex obtuse.

**Florets.** Fertile lemma elliptic, 0.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex lobed, 5 -fid, incised 0.25 of lemma length, truncate, muticous. Palea 0.5 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.

$2n = 14$ (1 ref TROPICOS).

**Distribution (TDWG), Continent.** Europe, Africa.

**Region.** Southwestern Europe.

**Country /Province /State.** : France, Portugal, Spain. **Western Indian Ocean.** Madagascar.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Basal innovations intravaginal. Culms erect or geniculately ascending, 15–55 cm long. Leaf-sheaths smooth or antrorsely scabrous. Ligule an eciliate membrane, 0.8–2.2 mm long, glabrous on abaxial surface or scaberulous on abaxial surface, erose or lacerate, truncate. Leaf-blades 3.5–10 cm long, 1–2.5 mm wide. Leaf-blade surface scaberulous, rough adaxially or on both sides. Leaf-blade margins scaberulous. Leaf-blade apex acute or acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, hairy in 2 tufts.


**Florets.** Fertile lemma ovate, 2.3–3.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, muticous or awned, 1 -awned.
Principal lemma awn dorsal, arising 0.5–0.66 way up back of lemma, straight, 0–2 mm long overall. Palea 0.5–0.8 mm long, 0.25 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.6–1.2 mm long. Caryopsis with adherent pericarp, 1–1.8 mm long. Hilum linear.

\(n = 21\) (1 ref TROPICOS). \(2n = 42\) (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** New Zealand. New Zealand North I, New Zealand South I.

### Agrostis elliotiana Schult. Mant. 2: 372 (1824).


**TYPE** from USA. T.: *Type of Basionym*: *fide* TROPICOS and Kew Synonomy Database: Based on A. arachnoides Ell. ; USA, Orangeburgh: Bennett (CHARL holo).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms weak, 2.5–30 cm long. Lateral branches lacking. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 1.5–5 mm long, obtuse. Leaf-blades flat or conduplicate, 2–7 cm long, 1–1.6 mm wide. Leaf-blade surface ribbed.

**Inflorescence.** Inflorescence a panicle, deciduous as a whole. Panicle open, ovate, effuse, 5–20 cm long. Primary panicle branches 2–5 -nate, whorled at most nodes. Panicle branches capillary. Spikelets solitary, Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.2–2.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.2–2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.2–2 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.1–1.8 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins extending close to apex. Lemma apex erose, obtuse, muticous or awned, 1 -awned. Principal lemma awn subapical, flexuous, 4–8 mm long overall, without a column. Palea absent or minute.


\(2n = 28\) (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico. Illinois, Kansas, Missouri, Oklahoma. Indiana, Maine, Massachusetts, Ohio. California. Texas. Alabama, Arkansas, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia. Southeast Mexico.

### Yucatan.


Illustrations (Books): J. Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (113, Fig. 34).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Culms geniculately ascending, 50–70 cm long. Ligule an eciliate membrane, 2 mm long, truncate. Leaf-blades 10–25 cm long, 3–5 mm wide, stiff. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


**Florets.** Fertile lemma oblong, 2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 3 mm long overall, with twisted column. Palea 0.5 mm long. 0.2 length of lemma, hyaline.


**Distribution (TDWG).** Continent. Africa.

**Country/Province/State.** Western Indian Ocean. Madagascar.


Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online.


Illustrations (Books): J. Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (115, Fig. 35).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Culms decumbent, 60–80 cm long. Ligule an eciliate membrane, 3–4 mm long. Leaf-blades 10–20 cm long, 2–6 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 2.5 mm long, 0.8 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3.5–4 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3.5–4 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn
subapical, straight, 2.5 mm long overall, without a column. Palea 2.5–3 mm long, 0.75–1 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.8 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Africa.

**Country/Province/State.** Western Indian Ocean, Madagascar.

**Agrostis continuata** Stapf. *Kew Bull.* 1897, 290. (1897).


**Illustrations (Books):** L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (99, Fig. 70, as *A. natalensis*).

**Derivation** (Clifford & Bostock 2007): L. *continuus*, uninterrupted; -ata, possessing. The rhachilla projects conspicuously beyond the floret.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 30–70 cm long, 2–4 -noded. Ligule an eciliate membrane. Leaf-blades 8–25 cm long, 2–3 mm wide. Leaf-blade surface glabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma ovate, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface glabrous or pilose. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2–0.25 way up back of lemma, geniculate, 2–4 mm long overall, with twisted column. Palea 0.25–0.33 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.

**Distribution (TDWG).** Continent. Africa.


**Illustrations (Books):** L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (100, Fig 71), G.E.Gibbs Russell el al, *Grasses of Southern Africa* (1990) (33, Fig 12 var. eriantha).


**Derivation** (Clifford & Bostock 2007): Gk. *erion*, wool; anthos, flower. With wooly glumes, lemmas or awns.

**Classification.** Subfamily Pooideae. Tribe: Poeae.
**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms 30–70 cm long. Ligule an eciliate membrane. Leaf-blades filiform, conduplicate, 9–18 cm long, 1–2 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3.5–5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3.5–5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 3.5–5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface pubescent. Lemma apex dentate, 4 -fid, truncate, awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 5–8 mm long overall, with a straight or slightly twisted column. Palea 0.75 length of lemma, hyaline, 2 -veined.


**Distribution (TDWG). Continents.** Europe, Africa.

**Region. Northern Europe (*).**

**Country /Province /State.** : GB Aliens (Ryves et al). **Southern Africa.** Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Eastern Cape.

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**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk. erion, wool; lepis, scale. With densely hairy glumes, sterile lemmas or palea.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 30–45 cm long, 3–4 -noded. Culm-internodes smooth. Leaves cauline. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule an eciliate membrane, 2.5–3 mm long, lacerate. Leaf-blades 5–10 cm long, 2–3 mm wide. Leaf-blade surface scabrous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 7–15 cm long. Primary panicle branches ascending, 2–7 -nate, whorled at most nodes, 2–5 cm long. Panicle branches puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.4–0.5 mm long.


**Florets.** Fertile lemma elliptic, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 3–4 mm long overall, with twisted column. Palea 0.7 mm long, 0.33 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.7 mm long. Caryopsis with adherent pericarp, ellipsoid or oblong, 1.2 mm long, dark brown. Hilum linear.

**Distribution (TDWG).** Continents. Temperate Asia.

**TYPE** from Chile. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Concepción, d’Urville s.n herb. Kunth.


**Derivation** (Clifford & Bostock 2007): L. exaro, plough up. With furrows between the nerves of the lemmas.;

**Classification.** Subfamily Pooidae. Tribe: Poaeae.

**Habit,** **Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–90 cm long. Leaf-sheaths smooth or antrorsely scabrous. Ligule an eciliate membrane, 3–6 mm long. Leaf-blades 4–15 cm long, 2–6 mm wide. Leaf-blade surface scabrous.

**Inflorescence.** Inflorescence a panicle. Peduncle antrorsely scabrous above. Panicle contracted, linear, interrupted, 10–18 cm long, 1–3 cm wide. Primary panicle branches appressed or ascending, 1–4 cm long, bearing spikelets almost to the base. Panicle branches stiff, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous or pilose.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2.5–3.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume lanceolate, 2.5–3.5 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma oblong, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight or geniculate, 5 mm long overall, without a column or with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.6 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent Europe, Temperate Asia, Pacific, North America.

**Region.** Northern Europe (*).

Wyoming, North Dakota, Nebraska, Oklahoma, South Dakota, Vermont, Arizona, California, Nevada, Utah, New Mexico, Texas, Arkansas, Kentucky, Central Mexico, Northeast Mexico, Northwest Mexico.

District Federal. Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo. Baja California, Baja California Sur.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, slender, 10–20 cm long, 0 -noded. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades straight, involute, 1–4 cm long, 1–2 mm wide. Leaf-blade surface glabrous.

**Inflorescence:** Inflorescence a panicle. Panicle open, elliptic, 1–5 cm long, bearing few spikelets. Primary panicle branches ascending, rebranched above middle. Panicle branches smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–1.6 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1.5–1.6 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.5–1.6 mm long, 1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.5–1.6 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, obtuse, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 0–2 mm long overall. Palea 0.75 length of lemma, hyaline. Rhachilla extension 0.33 length of fertile floret.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica. Guatemala.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Khasia Hills: Clarke.

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 13–35 cm long. Ligule an eciliate membrane, 1–2 mm long, truncate. Leaf-blades 2.5–7.5 cm long, 1–2.5 mm wide. Leaf-blade surface smooth or scaberulous, rough adaxially.

**Inflorescence:** Inflorescence a panicle. Panicle open, linear, interrupted, 5–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.2–2.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.2–2.7 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.4–1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.66 way up back of lemma, geniculate, 1–2 mm long overall, with twisted column. Palea 0.5 mm long, hyaline, 2 -veined. 

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.5–0.8 mm long. Stigmas 2, laterally exserted. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.

\[ n = 21 \text{ (1 ref TROPICOS) } \]

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent, Indo-China. Assam, India, Pakistan, West Himalaya.


**TYPE** from Japan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Japan, Hakodate Mt.: *Faurie 1125* .

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. unable to support its own weight. Inflorescence branches long and thin and so droop.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms erect or geniculately ascending, 15–30 cm long, 1 mm diam., 3 -noded. Leaf-sheaths smooth. Ligule an eciliate membrane, 0.5–2 mm long, scaberulous on abaxial surface. Leaf-blades flat or involute, 3–10 cm long, 0.5–2 mm wide. Leaf-blade surface smooth.

**Inflorescence.** Inflorescence a panicle. Peduncle smooth. Panicle open, ovate, 4–8 cm long, 3–4 cm wide. Primary panicle branches 2–5 -nate, 2–7 cm long. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–2 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2.5–3 mm long, 1.2 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2–2.5 mm long, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 1.5–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure, extending close to apex. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.05–0.1 way up back of lemma, geniculate, 3–5 mm long overall, with twisted column. Palea present or absent or minute, 0–0.2 mm long, 0–0.1 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.8–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

\[ 2n = 14, \text{ or 28 (4 refs TROPICOS) } \]

**Distribution (TDWG).** Continent. Temperate Asia.


**TYPE** from Ecuador. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ecuador, Pichincha: Jameson 229 (K holo).


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicule. Panicle spiciform, oblong, continuous or interrupted, 5–10 cm long, 1–1.7 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.2–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 3.2–3.5 mm long, membranous, purple or black, 1-keeled, 1 -veined. Lower glume surface veins absent. Lower glume surface smooth or asperulous. Lower glume apex acuminate. Upper glume oblong, 3.2–3.5 mm long, membranous, purple or black, 1-keeled, 1 -veined. Upper glume surface veins absent. Upper glume surface smooth or asperulous. Upper glume apex acuminate.

**Florets.** Fertile lemma ovate, 2 mm long, membranous, without keel. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 2–2.5 mm long overall, with twisted column. Palea absent or minute.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia, Ecuador, Peru.

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**TYPE** from Taiwan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Taiwan, Mt. Nankotaisan: Ohwi 4147 (K iso).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Eastern Asia. Taiwan.

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**Accepted by:** W.D. Clayton & K. Harman, *GrassBase* (2008) and online.

**TYPE** from Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Peru, Andes de Pasco: Poeppig (LE holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. frost. Growing at high altitudes.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 35–60 cm long. Ligule an eciliate membrane, 4–5 mm long. Leaf-blades 2–4 mm wide. Leaf-blade surface scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret.


Florets. Fertile lemma elliptic, 1.5–1.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy at base. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.4–0.5 way up back of lemma, geniculate, 2 mm long overall, with twisted column. Palea 0.4–0.5 length of lemma, hyaline.


Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.


TYPE from Mexico. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Mexico, Oaxaca: Ghiesbreght.

Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret.


Florets. Fertile lemma elliptic, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, with twisted column. Palea absent or minute.


Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica. Guatemala.


**TYPE** from Germany. **Basionym or Replaced Name:** *Agrostis nigra* With. *Arr. Brit. Pl.* ed. 3(2) 131 (1796). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Germany, Bremen n: Roth.

**Recent Synonyms:** *Agrostis diffusa* Banks & Sol. ex Hook. f., in syn, non Host (1809), *Fl. Nov.-Zel.* 1:298 (1853).


**Classification.** Subfamily Pooidaeae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms geniculately ascending or decumbent, 40–120 cm long, 3–6-noded, rooting from lower nodes. Culm-internodes smooth. Leaf-sheaths without keel, smooth or scaberulous. Ligule an eciliate membrane, 1.5–6 mm long, truncate. Leaf-blades 5–20 cm long, 2–8 mm wide. Leaf-blade surface ribbed, scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong to ovate, effuse, 8–25 cm long, 3–15 cm wide. Primary panicle branches whorled at most nodes. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 0.5–3 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma oblong, 1.3–2.3 mm long, hyaline, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma apex truncate. Palea oblong, 0.5–0.7 length of lemma, hyaline, 2 -veined. Palea apex obtuse.

**Flower and Fruit.** Lodicles 2, lanceolate, membranous. Anthers 3, 1–1.5 mm long. Stigmas 2, laterally exserted. Caryopsis with adherent pericarp, ellipsoid, isodiametric, biconvex, stipitate, without sulcus, smooth, apex unappendaged. Embryo 0.2 length of caryopsis. Hilum linear, 0.9 length of caryopsis. Endosperm farinose.

\[ n = 21 \ (3 \text{ refs TROPICOS}), \ 2n = 28, \text{ or } 42 \ (6 \text{ refs TROPICOS}) \]

**Distribution (TDWG).** Continent: Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*), North America, South America, Antarctica.

**Region.** Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.
**Country /Province /State.** : Denmark, Finland, Great Britain, Ireland, Norway, Sweden. : Austria, Belgium, Czechoslovakia, Germany, Hungary, Poland, Switzerland. : France, Spain. : Albania, Bulgaria, Italy, Crete, Romania, Turkey, Europe, Yugoslavia. Belarus, Estonia, Latvia, Lithuania, Baltic States, Krym, Central European Russia, East European Russia, North European Russia, South European Russia, Northwest European Russia, Ukraine. **Southern Africa (*)&**, Mpumalanga, KwaZulu-Natal, Lesotho, Western Cape, Eastern Cape, Siberia, Russian Far East. **Middle Asia, Caucasus, Western Asia, China.** Mongolia. **Eastern Asia, Russia.** Altay, Buryatiya, Chita, Irkutsk, Krasnoyarsk, Tuva. Kamchatka, Kuril Is, Magadan, Primorye, Sakhalin. Kazakhstan, Turkmenistan, Tadzhikistan, Uzbekistan. North Caucasus, Transcaucasus. Afghanistan, Iran, China South Central, Inner Mongolia, Manchuria, China North-Central, China Southeast, Tibet, Xinjiang. Mongolia. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. Japan, Korea. **Indian Subcontinent, Indo-China.** Assam, India, Nepal, Pakistan, West Himalaya. Thailand. **Australia (*)&**, **New Zealand (*)&**, New South Wales (*)&, Queensland (*)&, South Australia (*)&. **Victoria (*)&**, Western Australia (*)&. Lord Howe-Norfolk Is (*)&. **New Zealand North I**, **New Zealand South I.** Subarctic America, Eastern Canada, Northwest USA, Mexico. Greenland. Colorado. Central Mexico, Northeast Mexico. **Mesoamerica, Western South America, Brazil. Southern South America.** Costa Rica. Bolivia, Ecuador, Peru. Brazil South. Argentina South, Chile Central, Chile South, Uruguay. **Subantarctic islands.** Tristan de Cunha.


**Agrostis glabra** (HBK) Spreng. Syst. 1: 262 (1825).


**TYPE** from Chile. **Basionym or Replaced Name:** *Trichodium glabrum* Presl, *Rel. Haenk.* 1: 244 (1830). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Chile: Haenke.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, culms solitary. Rhizomes short or elongated. Culms erect, 25–70 cm long. 2–4 -noded. Culm-nodes brown. Leaves cauline. Leaf-sheaths 2.5–20 cm long, smooth or scaberulous. Ligule an eciliate membrane, 3–10 mm long, scaberulous on abaxial surface, erose. Leaf-blades 2.5–15 cm long, 1.5–5 mm wide. Leaf-blade surface scabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.6–3.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.33–0.5 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.6–3.1 mm long, 1.5–1.6 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.6–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, muticous or mucronate. Principal lemma awn dorsal. Palea absent or minute.
Flower and Fruit. Lodicules 2, 0.4–0.5 mm long, membranous. Anthers 3, 1.2–1.8 mm long. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South. Mendoza, San Juan. Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santiago, Valparaiso, Chiloe, Aisen, Magallanes. Coquimbo, Santiago, O’Higgins, Maule, Biobio, La Araucania. Los Lagos, Aisen, Magallanes.


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–0.5 mm long.


Florets. Fertile lemma oblong or ovate, 2–2.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 1–2.5 mm long overall. Palea oblong, 1 mm long, 0.25 length of lemma, hyaline, 2 -veined. Palea apex obtuse.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.8–1 mm long. Caryopsis with adherent pericarp.


Country /Province /State. Subantarctic islands. Tristan de Cunha.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. gracilis, slender; folium, leaf. Leaf blades less than 0.5 mm broad.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 5–60 cm long. Ligule an eciliate membrane. Leaf-blades filiform or aciculate, involute, 2–2.5 cm long, 1 mm wide, stiff. Leaf-blade venation without layer of subepidermal sclerenchyma masking vein striation or with continuous uniform subepidermal sclerenchyma layer on the underside. Leaf-blade surface smooth.


Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.


Florets. Fertile lemma ovate, 2–3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface glabrous or pubescent. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 3–5 mm long overall, with twisted column. Palea 1 length of lemma, hyaline, 2 -veined. Rhachilla extension 0.1–0.2 length of fertile floret, pilose.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 10–20 cm long. Ligule an eciliate membrane, 0.5–1.5 mm long. Leaf-blades flat or involute, 1–10 cm long, 0.5–4 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acuminate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous or sparsely hairy. Floret callus hairs 0–0.3 mm long.


Florets. Fertile lemma elliptic to oblong, 1.3–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins prominent, excurrent or extending close to apex. Lemma surface smooth or scaberulous, glabrous or pubescent. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal,
arising 0.1–0.2 way up back of lemma, geniculate, 2–4 mm long overall, with twisted column. Palea 0.6–0.8 length of lemma, hyaline, 2 -veined.


**Agrostis griffithiana** (Hook. f.) Bor. *Grasses Burma, Ceyl., Ind. & Pakist.* 387 (1960).


**Illustrations:** None found.


**Classification.** Subfamily Pooidae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–100 cm long. Ligule an eciliate membrane, 2–3 mm long, scaberulous on abaxial surface, truncate. Leaf-blades 15–25 cm long, 3–4 mm wide, coriaceous. Leaf-blade surface smooth.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma ovate, 2–3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface pubescent. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.5 way up back of lemma, geniculate, 5–6 mm long overall, clearly exerted from spikelet, with twisted column. Palea 1 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.25 mm long. Caryopsis with adherent pericarp.

\[n = 14\] (2 refs TROPICOS).


**Type** from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: USA, Oregon: Hall (US holo).


**Derivation** (Clifford & Bostock 2007): in honor of Elihu Hall (1822–82) United States farmer and amateur botanist.
**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Culms 40–100 cm long. Lateral branches lacking. Leaf-sheaths smooth. Ligule an eciliate membrane, 2–6 mm long, lacerate, acute. Leaf-blades 3–4 mm wide. Leaf-blade surface scaberulous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate or ovate, 7–18 cm long. Primary panicle branches ascending or spreading, whorled at most nodes. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.2–4.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 1–2 mm long.


**Florets.** Fertile lemma elliptic, 3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins prominent, extending close to apex. Lemma apex entire or dentate, 4 -fid, truncate, muticus. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, 0.5 mm long, membranous. Anthers 3, 1.6–1.8 mm long, purple. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Northwest USA, Southwestern USA. Oregon. California.


**TYPE** from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: USA, Oregon, Gold Hill: *Henderson 12387*.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 11 cm long, 2 -noded. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2–3 mm long, acute. Leaf-blades flat or convolute, 1–3 cm long, 1 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, oblong, 2.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma elliptic, 3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, geniculate, 6–10 mm long overall. Lateral lemma awns present, arising on apex of lobes, 0.5 mm long. Palea absent or minute.
Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.75–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear.


Accepted by: W.D Clayton & K.Harman, GrassBase (2008) and online.
Illustrations: None found.
Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From Hesperis, that is of the west. In this instance, from Spain and Portugal.
Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely or moderately. Rhizomes short. Stolons present. Basal innovations intravaginal. Culms erect or geniculately ascending, 30–60 cm long, 3–4 -noded. Leaf-sheaths smooth. Ligule an eciliate membrane, 2.5–3 mm long, 1–2.2 mm long on basal shoots, acute. Leaf-blades conduplicate, 3.3–7 cm long, 1–3 mm wide. Leaf-blade surface scabrous, rough on both sides.
Inflorescence. Inflorescence a panicle. Panicle open, ovate or pyramidal, 6–15 cm long, 2–5 cm wide. Primary panicle branches 5–6 -nate, whorled at lower nodes. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1 length of fertile spikelet, scabrous, tip widened.
Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 1.9–2.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–0.3 mm long.
Florets. Fertile lemma ovate, 1.4–1.9 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface scaberulous. Lemma apex truncate or acute, muticous or awned (rarely), 1 -awned. Principal lemma awn dorsal, geniculate, 2 mm long overall, with twisted column. Palea oblong, 0.05–0.35 mm long, 0.04–0.2 length of lemma, hyaline, 2 -veined. Palea apex dentate, 2 -fid.
Flower and Fruit. Lodicules 2, lanceolate, 0.35–0.5 mm long, membranous. Anthers 3, 1–1.6 mm long. Stigmas 2, laterally exerted. Caryopsis with adherent pericarp, 1.2 mm long, apex unappendaged. Hilum linear. Endosperm farinose.

2n = 28 (1 ref TROPICOS).
Distribution (TDWG). Continent. Europe.
Region. Southwestern Europe.
Country/Province/State. : Spain.


TYPE from Japan. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Japan, Sasagamine: Ohwi .
Illustrations: None found.
**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms erect, 20–40 cm long, 0.5–0.8 mm diam., 4–5 -noded. Leaf-sheaths smooth. Ligule an eciliate membrane, 0.8–1 mm long, truncate or obtuse. Leaf-blades 3–10 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, effuse, 5–8 cm long, 2–3 cm wide, with spikelets clustered towards branch tips. Primary panicle branches 4–7 -nate, 1–3 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 3–8 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 3–3.5 mm long, 1.1–1.2 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 2.7–3 mm long, 1.7–1.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.5–1.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface scaberulous, rough above. Lemma apex dentate, 4 -fid, awned, 5 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 3–3.5 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 0.8–1 mm long, shorter than principal. Palea 0.2 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.8–1 mm long. Caryopsis with adherent pericarp, oblong, 1.25 mm long. Hilum linear. Endosperm farinose.

**Distribution (TDWG). Continent.** Temperate Asia.


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**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Assam, Nyukmadung: *Kingdon-Ward 11538* (BM holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating location. From the Himalayas.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Culms 15–30 cm long, with 0.33–0.5 of their length below uppermost node. Culm-nodes glabrous. Leaf-sheaths antrorsely scabrous. Ligule an eciliate membrane, 3–4 mm long, white or brown, scaberulous on abaxial surface, obtuse or acute. Leaf-blades 5–15 cm long, 2–5 mm wide, flaccid. Leaf-blade surface scaberulous, rough abaxially. Leaf-blade margins scaberulous. Leaf-blade apex acute or acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 4–8.5 cm long, 2–3 cm wide. Primary panicle branches ascending, 1–2 -nate. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, smooth or scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or elliptic, laterally compressed, 1–1.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume elliptic, 1–1.2 mm long, 1 length of upper glume, membranous, mid-green or purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1–1.2 mm long, 1 length of adjacent fertile lemma, membranous, mid-green or purple, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, muticous. Palea absent or minute.
Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.4 mm long, purple. Caryopsis with adherent pericarp. Hilum linear.

\[ n = 14 \] (2 refs TROPICOS).

**Distribution (TDWG). Continent.** Tropical Asia.

**Country /Province /State. Indian Subcontinent.** Assam, Eastern Himalaya. Sikkim. Assam.


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online, J.F.Veldkamp, Poaceae ms (Flora Malesiana).


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Basal innovations intravaginal. Culms erect, 60–120 cm long. Leaf-sheaths smooth. Ligule an eciliate membrane, 7.5 mm long, erose, obtuse. Leaf-blades flat or involute, 15–30 cm long, 2–3 mm wide, flaccid. Leaf-blade surface scabrous.

**Inflorescence.** Inflorescence a panicle. Peduncle antorsely scabrous above. Panicle open, elliptic, effuse, 30 cm long, 8 cm wide. Primary panicle branches 6–12.5 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension or with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.3–4.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.35–0.5 mm long, 0.1–0.2 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 4.3–4.8 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 4.3–4.8 mm long, 1.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 2.65–2.85 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma surface pubescent. Lemma apex erosive, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.4–0.5 way up back of lemma, geniculate, 5.5–6.5 mm long overall, with twisted column. Column of lemma awn 1.6–3.25 mm long. Palea 1.25 mm long. 0.4–0.5 length of lemma, hyaline, 2 -veined. Rhachilla extension 0–0.25 mm long, glabrous.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.75–0.9 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG). Continent.** Tropical Asia.

**Country /Province /State. Papuasia.** New Guinea PNG. New Guinea.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms erect, 9–24 cm long. Culm-internodes terete, smooth, distally glabrous. Leaf-sheaths longer than adjacent culm internode, smooth, glabrous on surface. Ligule an eciliate membrane, 1–2.5 mm long, truncate or obtuse. Leaf-blades erect, straight or curved, filiform, involute, 3–6 cm long, 0.4–0.6 mm
wide, stiff. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough adaxially. Leaf-blade margins scaberulous. Leaf-blade apex obtuse or abruptly acute.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, 1.5–3.5 cm long, 0.2–0.4 cm wide. Primary panicle branches appressed, 2–3 -nate, 0.7–1.5 cm long. Panicle axis smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 0.5–2.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


**Fertile Spikelets.** Fertile lemma elliptic or ovate, 1.6–1.7 mm long, hyaline, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma apex entire or dentate, 2 -fid, truncate, mucronate. Principal lemma awn 0.4–0.8 mm long overall. Palea oblong, 0.66 length of lemma, hyaline, 2 -veined. Palea apex emarginate or truncate.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3. Caryopsis with adherent pericarp, lanceolate or oblong, 1–1.2 mm long.

**Distribution (TDWG). Continent.** Antarctica.

**Country /Province /State.** Subantarctic islands. Tristan de Cunha.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Sikkim: *Hooker*.


**Illustrations (Books):** H.J.Noltie, *The Grasses of Bhutan* (2000) (605, Fig. 26), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 470).

**Derivation (Clifford & Bostock 2007):** L. -ana, indicating connection. As for hookeri, usually in honor of Joseph Dalton Hooker (1817–1911), English botanist, traveller and Garden's Director.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.5–2.5 mm long, 0.5–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3–3.5 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 1.5–2 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 3.5 mm long overall, with twisted column. Palea absent or minute.
**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.5–0.75 mm long. Caryopsis with adherent pericarp. Hilum linear.

\[ n = 21 \text{ (1 ref TROPICOS).} \]

**Distribution (TDWG). Continent.** Temperate Asia, Tropical Asia.


**TYPE from USA.** T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: USA, California, Arroyo Grande to Huasna distr.: Hoover 7549 (NY holo, US).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, slender, 55–75 cm long. Lateral branches lacking. Ligule an eciliate membrane, 3–3.5 mm long, lacerate. Leaf-blades filiform, 10–15 cm long, 0.5–1 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


**Florets.** Fertile lemma elliptic, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma surface scaberulous. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 3–3.5 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.75–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG). Continent.** North America.

**Country /Province /State.** Southwestern USA. California.


**Classification.** Subfamily Pooideae. Tribe: Poeae.
**Habit, Vegetative Morphology**. Perennial, caespitose. Culms 30–60 cm long. Lateral branches lacking. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 2–3.5 mm long, erose or lacerate, obtuse or acute. Leaf-blades 15–25 cm long, 3–5 mm wide, flaccid.


**Fertile Spikelets**. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.5 mm long.


**Florets**. Fertile lemma elliptic, 2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 6–7 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit**. Lodicules 2, 0.4 mm long, membranous. Anthers 3, 1–2 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG). Continent**. North America.

**Country /Province /State.** Northwest USA. Oregon, Washington.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 463).


**Classification**. Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology**. Perennial, caespitose. Rhizomes elongated. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms 7–12 cm long, 2 - noded. Culm-internodes elliptical in section. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.5–2 mm long, truncate or obtuse. Leaf-blades 5–12 cm long, 2–3 mm wide.

**Inflorescence**. Inflorescence a panicle. Panicle open, linear or oblong, dense, 3–7 cm long, 1.2 cm wide. Primary panicle branches appressed, 3 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets**. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.5 mm long.


**Florets**. Fertile lemma elliptic, 3 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma apex muticous. Palea 0.5 mm long, 0.25–0.33 length of lemma, hyaline.

**Flower and Fruit**. Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG). Continent**. Temperate Asia.
**Country /Province /State.** China. China South Central, China North-Central, Qinghai. Gansu, Shaanxi. Sichuan, Yunnan.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

**Type** from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Andohahela: Humbert 13546.

Illustrations: None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.4–0.6 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 4.5 mm long, 1.2 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex acuminate. Upper glume lanceolate, 3.5–4 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 2.5–3 mm long, hyaline, without keel. Lemma surface puberulous. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, geniculate, 5–6 mm long overall, with twisted column. Palea 2 mm long, hyaline.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Western Indian Ocean. Madagascar.


**Type** from USA. Basionym or Replaced Name: *Cornucopiae hyemale* Walt., *Fl. Carol.* 73 (1788). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: USA, South Carolina; Coll?.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–70 cm long. Ligule an eciliate membrane, 1.5–4 mm long. Leaf-blades 0.5–3 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–2.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.5–2.1 mm long, 1 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute or
acuminate. Upper glume lanceolate, 1.5–2.1 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma oblong, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex muticous. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Europe, Temperate Asia, North America, South America.

**Region.** Northern Europe, Southwestern Europe.


**TYPE** from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Brazil, Rio Jacuhy: Sellow (B holo, BAA, LE).


**Illustrations (Books):** F.O. Zuloaga, Z.E. Rugolo & A.M. Anton, *Flora Argentina 3 – 2 Pooideae* (2012) (160, as *Bromidium*), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catariensis Gramineas* (1981–1982) (476, Fig. 102, 483, Fig. 104 & 493, Fig. 105 as var. *tandilensis*), E.G. Nicora, *Los Generos de Gramineas de America Austral* (1987) (160, Fig. 40 as *Bromidium*), A. Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (125, Fig. 40), B. Rosengurtt, *Gramineas Uruguayas* (1970) (22, Fig. 3).

**Derivation** (Clifford & Bostock 2007): Gk. hygros, water; metron, measure; -ike, belonging to. Aquatic or swamp species.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect, 10–60 cm long. Ligule an eciliate membrane, 1–6 mm long. Leaf-blades 2–3 mm wide.

**Inflorescence.** Inflorescence a panicle or a panicle with branches tipped by a raceme. Panicle open, lanceolate, interrupted, 5–20 cm long, 1–3 cm wide, contracted about primary branches. Primary panicle branches appressed or ascending, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present. 

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.5–4 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 2–2.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, truncate, awned, 3 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 4–6 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes (outer lobes), 0.8 mm long. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.5–0.7 mm long. Caryopsis with adherent pericarp, oblong, 1.5 mm long, dark brown. Hilum linear.

**Distribution (TDWG).** Continent. South America.


Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Idaho, USA.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 10–30 cm long. Lateral branches lacking. Leaves mostly basal. Ligule an eciliate membrane, 1–2 mm long, erose or lacerate, obtuse or acute. Leaf-blades flat or conduplicate, 0.5–1.5 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.6–2.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


Florets. Fertile lemma elliptic, 1.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex muticous. Palea present or absent or minute, 0–0.2 mm long, 0.1–0.2 length of lemma, hyaline.

Flower and Fruit. Lodicles 2, 0.2–0.3 mm long, membranous. Anthers 3, 0.3 mm long. Caryopsis with adherent pericarp. Hilum linear.


Derivation (Clifford & Bostock 2007): L. feeble. Habit creeping or inflorescence slender.


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Basal innovations extravaginal. Culms erect or geniculately ascending, 15–35 cm long. Ligule an eciliate membrane, 0.8–1.6 mm long, glabrous on abaxial surface, entire or erose, obtuse. Leaf-blades filiform, involute, 2–13 cm long, 0.2–0.4 mm wide, flaccid. Leaf-blade surface ribbed, scabrous, rough adaxially. Leaf-blade apex abruptly acute.
Inflorescence. Inflorescence a panicle. Peduncle smooth. Panicle spiciform, linear, 5–9 cm long, 0.2–0.3 cm wide. Primary panicle branches appressed. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 1.5–2.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callosus glabrous.

Glumes. Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1.5–2.4 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.5–2.4 mm long, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma ovate, 1.5–1.9 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lower glume lanceolate, 1.5–2.4 mm long, purple, 1-keeled, 1 -veined. Lower glume apex acute. Upper glume lanceolate, 2.8–3.1 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume apex acute.

Flower and Fruit. Lodicules 2, 0.2–0.4 mm long, membranous. Anthers 3, 1.2–1.8 mm long. Caryopsis with adherent pericarp, ovoid, 1.5–1.6 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.
Country/Province/State. Western South America, Southern South America. Bolivia, Peru, Argentina South, Chile Central, Chile South.


TYPE from Chile. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Chile, Chillan: Philippi (SGO holo, BAA).

Illustrations (Books): M.N.Correa, Flora Patagonica Parte III, Gramineae (1978) (382, Fig. 255).

Derivation (Clifford & Bostock 2007): L. beardless. Glumes and/or lemmas glabrous.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes elongated. Butt sheaths yellow. Culms geniculately ascending, 30–65 cm long. Leaf-sheaths 3–11 cm long, antrorsely scabrous. Ligule an eciliate membrane, 5–8 mm long, scaberulous on abaxial surface, entire or lacerate , acute. Leaf-blades filiform, conduplicate or convolute, 3–11 cm long, 0.5–1 mm wide, stiff, mid-green. Leaf-blade surface scabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.8–3.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callosus glabrous or sparsely hairy.


Florets. Fertile lemma elliptic, 2.1–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lower glume surface scaberulous, rough above or on veins. Lemma apex truncate, muticosus or mucronate. Principal lemma awn dorsal. Palea absent or minute.

Flower and Fruit. Lodicules 2, 0.4 mm long, membranous. Anthers 3, 1.2–1.8 mm long. Caryopsis with adherent pericarp, ovoid, 1.5–1.6 mm long. Hilum linear.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Sikkim: *Hooker 10*.


**Derivation** (Clifford & Bostock 2007): *L. inaequalis*, unequal; gluma, husk. Glumes differing in length and/or shape.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology**. Annual, caespitose, clumped densely. Culms erect, 4–5 cm long. Ligule an eciliate membrane, 1 mm long, erose. Leaf-blades convolute, 2–3 cm long, 1–2 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 2.5–4 cm long. Primary panicle branches not whorled or whorled at most nodes. Panicle branches capillary, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1–1.5 mm long, smooth.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.5 mm long, 1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1(-3) -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent or obscure. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex muticous. Palea absent or minute. Ratchilla extension glabrous.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.4 mm long. Caryopsis with adherent pericarp, 1 mm long.

\[ n = 14 \] (2 refs TROPICOS).

**Distribution (TDWG).** Continent: Temperate Asia, Tropical Asia.

**Country /Province /State.** China. China South Central. Indian Subcontinent. Assam, Eastern Himalaya, India.

Yunnan. Bhutan, Sikkim. West Bengal.


**TYPE** from Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Chile, Antuco: Poeppig 22 (P lecto).


both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus sparsely hairy.


**Florets.** Fertile lemma elliptic, 1.8–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.75 way up back of lemma, straight, 0–1 mm long overall. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.7 mm long. Caryopsis with adherent pericarp, 1.6 mm long. Hilum linear.

**Distribution (TDWG).** Continent: South America. Country /Province /State: Southern South America. Argentina South, Argentina Northwest, Chile Central, Chile South.


**TYPE** from Indonesia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Java, Dieng: Junghuhn.


**Illustrations (Books):** C-C Hsu, Flora of Taiwan, Vol 5 (1978) (246 as A. morrisonensis), C-C Hsu, Taiwan Grasses (1975) (as A. morrisonensis), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 466).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes absent or short. Basal innovations extravaginal or intravaginal. Culms erect or geniculately ascending, 40–85 cm long, rooting from lower nodes. Leaf-sheaths smooth. Ligule an eciliate membrane, 4–7 mm long, erose, truncate or obtuse or acute. Leaf-blades flat or involute, 10–25 cm long, 3–6.5 mm wide. Leaf-blade surface smooth or scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, lanceolate or elliptic, 15–30 cm long. Primary panicle branches 2–11 cm long. Panicle branches smooth or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 1.5–4.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.1–0.3 mm long, 0.1 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.5–4.1 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 1.4–4 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 1.2–3.25 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate or obtuse or acute, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.3–0.8 way up back of lemma, geniculate, 2–4 mm long overall, with twisted column. Palea 0.1–2 mm long, 0.1–0.75 length of lemma, hyaline.
Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.55–1.4 mm long. Caryopsis with adherent pericarp. Hilum linear.


TYPE from Chile. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Chile, Isla Alao: Villagran & Mesa 5890 (CONC holo).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. insula, island; -are, pertaining to. Island species.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.6–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, hairy on the margins. Floret callus hairs 2–2.5 mm long.


Florets. Fertile lemma elliptic, 1.5–1.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, muticous. Palea 0.3 mm long, 0.2–0.25 length of lemma, 0 -veined.

Flower and Fruit. Lodicules 2, 0.5–0.6 mm long, membranous. Anthers 3, 0.6–0.9 mm long. Caryopsis with adherent pericarp. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile South. Los Lagos.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. isos, equal; pholis, scale of a snake. Glumes equal or subequal.


Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 30–45 cm long, 3–4 -noded, with 0.3–0.4 of their length below uppermost node. Culm-nodes glabrous. Lateral branches lacking or
sparse. Leaf-sheaths smooth. Ligule an eciliate membrane, 2–3 mm long, obtuse. Leaf-blades flat or involute, 5–10 cm long, 1–1.5 mm wide. Leaf-blade surface smooth or scaberulous, rough adaxially. Leaf-blade margins scaberulous. Leaf-blade apex attenuate, filiform.  


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or oblong, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.  

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2.5–3 mm long, 1 length of upper glume, membranous, glandular (minutely on veins), 1-keeled, 3 -veined. Lower glume primary vein scaberulous. Lower glume apex acute. Upper glume lanceolate, 2.5–3 mm long, 1 length of adjacent fertile lemma, membranous, glandular (minutely on veins), 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.  

**Florets.** Fertile lemma oblong or ovate, 2.5–3 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface asperulous, pilose, hairy below. Lemma apex truncate, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.6 way up back of lemma, straight, 1–2.5 mm long overall. Palea 1.5 mm long, 0.5–0.6 length of lemma, hyaline, 2 -veined. Rhachilla extension 0.3–0.5 mm long, pubescent.  

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.  

**Distribution (TDWG).** Continent. Africa.  
**Country/Province/State.** West-Central Tropical Africa. Rwanda.  

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**Illustrations:** None found.  


**Classification.** Subfamily Pooideae. Tribe: Poeae.  

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, slender, 20–30 cm long. Culm-internodes smooth or scaberulous. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.5–2 mm long, obtuse. Leaf-blades flat or conduplicate, 5–7 cm long, 1.5–2 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acuminate.  


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.7–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.  

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume oblong, 1.7–2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1.7–2 mm long, 1.4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.  

**Florets.** Fertile lemma ovate, 1.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma apex dentate, 4 -fid, truncate, muticous. Palea absent or minute.  


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose, clumped loosely. Culms erect or geniculately ascending, slender, 20–40 cm long, 2 -noded. Culm-internodes striate. Leaves mostly basal. Leaf-sheaths loose. Ligule an eciliate membrane, 3.5 mm long, obtuse. Leaf-blades 1–1.5 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, pyramidal, nodding, 6–12 cm long. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flexuous, 2.5–5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.8–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1 mm long or 8–25 mm long, 1 length of upper glume, membranous, light green or purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.8–2.5 mm long, 1.2–1.4 length of adjacent fertile lemma, membranous, light green or purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma oblong, 1.5–1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, muticous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 0.4–0.5 mm long. Caryopsis with adherent pericarp.


**Type** from Brazil. T:<Type of Basionym> fide TROPICOS and Kew Synonomy Database: Brazil, Porto dos Dorados: Juergens 190 (Holotypos, US).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Carlo Juergens (fl. 1905) who collected in Brazil.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. from Serra de Gerez, Portugal.


Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms geniculately ascending, 40–60 cm long. Culm-internodes smooth. Lateral branches lacking. Leaf-sheaths without keel, smooth, glabrous on surface. Ligule an eciliate membrane, 0.5–1 mm long, truncate. Leaf-blades 6–12 cm long, 4–9 mm wide. Leaf-blade surface smooth. Leaf-blade margins scabrous. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume oblong, 3 mm long. 1 length of upper glume, chartaceous, purple, 1-keeled, 3 -veined. Lower glume lateral veins obscure. Lower glume apex acute. Upper glume oblong, 3 mm long, 1.2 length of adjacent fertile lemma, chartaceous, purple, 1-keeled, 3 -veined. Upper glume lateral veins obscure. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 2.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface smooth or asperulous, rough above. Lemma apex dentate, 4 -fid, obtuse, muticosus. Palea 0.1–0.5 mm long, 0.05–0.2 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, 0.3 mm long, membranous. Anthers 3, 1 mm long, yellow. Caryopsis with adherent pericarp. Hilum linear.

Region. Southwestern Europe.
awned, 1-awned. Principal lemma awn dorsal, arising 0.3–0.4 way up back of lemma, geniculate, 3.5–5 mm long overall, with a straight or slightly twisted column. Palea 0.9 length of lemma, hyaline, 2-veined. Rhachilla extension 0–0.2 length of fertile floret, pubescent.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.

**Distribution (TDWG).** Continent. Africa.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Tanzania. T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: Tanzania, Kilimanjaro: Volkens 1831* (B holo).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, culms solitary or caespitose. Culms erect or geniculately ascending or decumbent, 30–90 cm long, 1–2 mm diam. Ligule an eciliate membrane. Leaf-blades 5–20 cm long, 1–4 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear or oblong or ovate, 5–22 cm long. Primary panicle branches ascending or spreading. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2.5–3(–4.5) mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.

**Glumes.** Glumes persistent, similar, with lower wider than upper, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 2.5–4.5 mm long, 0.75–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface smooth. Lower glume apex acuminate. Upper glume lanceolate, 2–4 mm long, 1.7–1.8 length of adjacent fertile lemma, membranous, eglandular or glandular (beside keel), 1-keeled, 1–3 -veined. Upper glume primary vein scaberulous. Upper glume surface smooth. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 1.5–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface pilose. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.25 way up back of lemma, geniculate, 3–6 mm long overall, with twisted column. Palea 1 length of lemma, hyaline, 2-veined. Rhachilla extension 0–0.25 length of fertile floret (0–1mm), pilose.


**Distribution (TDWG).** Continent. Africa.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Russia. T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: Russia, Magadanica, Omsikizan: Kuvajev 40–4 (LE holo, MW).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From the Kolyma Basin, northeastern Siberia.

**Classification.** Subfamily Pooideae. Tribe: Poeae.
**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms erect, 40–45 cm long. Culm-internodes smooth. Ligule an eciliate membrane, 3 mm long, lacerate. Leaf-blades flat or convolute, 0.6–2.2 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 6–16 cm long, 5 cm wide. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicles present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, muticous or awned, 1 -awned. Principal lemma awn subapical, straight, 0.6–0.8 mm long overall. Palea present or absent or minute, 0–1.6 mm long, hyaline.

**Flower and Fruit.** Anthers 3, 0.7 mm long, yellow.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country/Province/State.** Russian Far East. Magadan.


**TYPE** from Russia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Russia, Chetlas R.: *Korchagin* (LE holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Aleksandr Alexandrovich Korchagin (1900-) Russian botanist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Culms erect, 25–50 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.3–1.6 mm long, entire or lacerate, obtuse. Leaf-blades 6.5–9.5 cm long, 2.5 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins scabrous. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 4–12 cm long, 0.8–1 cm wide. Primary panicle branches 4–9 -nate, whorled at most nodes, 2.5–3 cm long. Panicle branches capillary, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicles present, filiform, terete.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2.2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.3–0.4 mm long.


**Florets.** Fertile lemma oblong or ovate, 2–2.1 mm long, 0.8–1.1 mm wide, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface asperulous, puberulous. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, straight or geniculate, 3.5–3.7 mm long overall, without a column or with twisted column. Palea 0.8–0.9 mm long, 0.33–0.5 length of lemma, hyaline, 2 -veined.
**Flower and Fruit.** Lodicules 2, lanceolate, 0.3–0.4 mm long, membranous. Anthers 3, 1.2–1.7 mm long. Stigmas 2, laterally exserted. Caryopsis with adherent pericarp, apex unappendaged. Hilum punctiform.

**Distribution (TDWG).** Continent. Europe.

**Region.** Eastern Europe.

**Country /Province /State.** East European Russia, North European Russia.


**TYPE** from China. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: China, Yunnan, Kunming: Qiu 50508 (KUN holo).

**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 470).

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Kunming, Yunnan Province, China.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms geniculately ascending, 35–70(–100) cm long, 1–2.6 mm diam., 3–7 -noded. Leaf-sheaths smooth. Ligule an eciliate membrane, 2.5–4 mm long, scaberulous on abaxial surface, obtuse. Leaf-blades flat or convolute, 10–16 cm long, 2.5–4 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate or ovate, 10–20(–25) cm long. Primary panicle branches ascending, 2–6 -nate, whorled at most nodes, 7–12 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2.5–3.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.3 mm long.


**Florets.** Fertile lemma oblong or ovate, 1.6–2.1 mm long, hyaline, without keel, 4–5 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma surface scaberulous, rough above. Lemma apex truncate, muticos or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.66 way up back of lemma, straight, 1 mm long overall. Pulea 0.2–0.5 mm long, 0.15–0.3 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Anthers 3, 1–1.5 mm long.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central.

Sichuan, Yunnan.


**Classification.** Subfamily Pooideae. Tribe: Poeae.
**Distribution (TDWG).** Continent: South America.


Illustrations (Books): T. Cope & A. Gray, Grasses of the British Isles (98), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (100, Fig. 72, as *A. huttoniae*; 101, Fig. 73), S.Phillips, *Poaceae (Gramineae)* in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (48, Fig. 22 as *A. huttoniae*).


Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms erect or geniculately ascending, 30–90 cm long, without nodal roots or rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades flat, 7–20 cm long, 2–4 mm wide, flaccid, light green.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without Rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


Florets. Fertile lemma oblong, 1.5–2 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma surface glabrous (rarely) or pubescent or pilose. Lemma hairs 0.5–1 mm long. Lemma apex erose, obtuse, muticous or mucronate (0–0.5mm). Principal lemma awn subapical. Palea 0.9 length of lemma, hyaline, 2 -veined.

Flower and Fruit. Lodicles 2, membranous. Anthers 3, 0.5–0.8 mm long. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.

n = 21 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Antarctica.

Region. Northern Europe (*).


Illustrations (Journals): J. Bot. Res. Inst. Texas (5(2): 423, Fig.1 (2011)).

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Basal innovations intravaginal. Culms erect or geniculately ascending or decumbent, slender, (1.5–)5–30 cm long, 0.25 mm diam., 2–3-noded. Culm-internodes smooth. Culm-nodes brown, glabrous. Lateral branches lacking. Leaves basal and cauline. Leaf-sheaths open for most of their length, mostly shorter than adjacent culm internode. Ligule an eciliate membrane, 1.2–1.7 mm long, erose, obtuse or acute. Leaf-blades flat or conduplicate or involute, (1.4–)5–11 cm long, 0.3–1(–1.5) mm wide. Leaf-blade surface scabrous, rough abaxially, glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle, comprising 12–90(–100) fertile spikelets. Panicle spiciform, linear, 1–7.5 cm long, 0.1–0.6 cm wide. Primary panicle branches 1–3-nate, 0.6–1.4 cm long. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–2.4 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny. Lower glume ovate, 1.5–2.4 mm long, 1 length of upper glume, herbaceous or scarious, 1-keeled, 1-veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume ovate, 1.5–2.4 mm long, herbaceous or scarious, 1-keeled. Upper glume primary vein scaberulous. Upper glume surface scabrous. Upper glume margins scaberulous. Upper glume apex acute.

Florets. Fertile lemma ovate, 1.1–1.5 mm long, hyaline, light green and purple (at tip), shiny, without keel, 5-veined, more than 3-veined. Lemma midvein extending to apex. Lemma lateral veins obscure. Lemma surface smooth, glabrous. Lemma apex truncate or obtuse, muticous. Palea 0.7–1.1 mm long, 0.5–0.66 length of lemma, hyaline. Palea apex obtuse.

Flower and Fruit. Lodicules 2, 0.4–0.5 mm long. Anthers 3, 0.4–0.7 mm long, yellow. Ovary glabrous. Caryopsis with adherent pericarp, ellipsoid, dorsally compressed, sulcate on hilar side, 0.9–1.2 mm long, light brown. Embryo 0.25 length of caryopsis. Hilum punctiform.


Country /Province /State. Southwestern USA. California.


Type from Australia. T:<Type of Basionym> fide TROPICOS and Kew Synonomy Database: Australia, Tasmania, Twisted Tarn: Buchanan 1187 (HO holo, AD, CANB, CHR, MEL, NSW).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L lacuna, pond. Growing around the margins of ponds.


**Florets.** Fertile lemma oblong, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex dentate, 4 -fid, truncate, awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight or geniculate, 1.5–3.25 mm long overall, with a straight or slightly twisted column. Column of lemma awn 1.5 mm long. Palea 0.9 length of lemma, hyaline, 2 -veined. Rachilla extension 0.5 mm long, pubescent, with 0.5 mm long hairs.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.6–0.8 mm long. Caryopsis with adherent pericarp.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. laxus, lax; -issima, most. Panicle very open.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Culms decumbent, weak, 50–60 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 3–4 mm long. Leaf-blades 8–15 cm long, 1–3 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 7–8 cm long, bearing few spikelets. Primary panicle branches ascending or spreading. Panicle branches flexuous, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, curved, 3 mm long overall. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.5 mm long. Caryopsis with adherent pericarp. Hilum linear.


**TYPE** from Turkey. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Turkey, Lazistan: Balansa 1542 (G holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to. From Lazica, now Lazistan, Turkey.

**Classification.** Subfamily Pooideae. Tribe: Poeae.
Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect or geniculately ascending, 5–30 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.5–2 mm long, truncate. Leaf-blades conduplicate, 2–7.5 cm long, 0.8–2 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, linear or oblong, dense, 2–8 cm long, 0.4–2 cm wide. Primary panicle branches appressed, 0.5–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear, terete, 0.5–1.5 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.1–0.2 mm long.


Florets. Fertile lemma elliptic to oblong, 1.8–2 mm long, hyaline, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, straight, 2–2.5 mm long overall, clearly exserted from spikelet. Palea oblong, 0.8–1 mm long, 0.5 length of lemma, hyaline, 2 -veined.

Flower and Fruit. Lodicules 2, lanceolate, membranous. Anthers 3, 0.6–0.8 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.

Country /Province /State. Caucasus, Western Asia. Iran.


TYPE from Colombia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Colombia, Paramo de Purace: Kilip & Lehmann 38598 (US holo).

Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 20–40 cm long. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 7–8 mm long, pubescent on abaxial surface, lacerate. Leaf-blades 6–8 cm long, 2.5–3 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 13 cm long, 3 cm wide. Primary panicle branches ascending or spreading, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret.


Florets. Fertile lemma elliptic, 1.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface glabrous. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 6 mm long overall, with a straight or slightly twisted column. Palea absent or minute.
Flower and Fruit. Lodicules 2, 0.7 mm long, membranous. Anthers 3, 0.6 mm long. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.


TYPE from Uruguay. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Uruguay, Curticeiras to Farrapos; Rosengurtt B-7107 (MVFA holo).


Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 10–24 cm long, 5–8 cm wide. Primary panicle branches 2–5 -nate, whorled at most nodes, rebranched at middle. Panicle axis with lower internodes 3–8 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, hairy in 2 tufts.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1.5–2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.5–2 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma elliptic, 1–1.5 mm long, hyaline, without keel, 5 –veined, more than 3-veined. Lemma apex erose, truncate, muticous. Palea absent or minute.

Flowe and Fruit. Lodicules 2, membranous. Anthers 3, 0.3–0.6 mm long. Caryopsis with adherent pericarp, ellipsoid or ovoid, sulcate on hilar side, 0.8–1 mm long, dark brown. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia. Brazil Southeast, Brazil South. Uruguay.


TYPE from Chile. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Chile, Valdivia: Gay (P lecto, BAA, K).


Derivation (Clifford & Bostock 2007): Gk. leptos, narrow; thrix, hair. Inflorescence branches very thin.
**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or short. Culms 20–50 cm long. Ligule an eciliate membrane, 3–4 mm long, lacerate. Leaf-blades 1–2.5 mm wide. Leaf-blade surface scaberulous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus sparsely hairy.


**Florets.** Fertile lemma ovate, 1.5–2.2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, mucronate or awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, straight, 0.2–1 mm long overall. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.8–1.5 mm long. Caryopsis with adherent pericarp, ovoid. Hilum linear.

**Distribution (TDWG).** Continent: South America.

**Country/Province/State.** Southern South America. Argentina South, Chile Central, Chile South. Chubut, Neuquén, Río Negro, Santa Cruz. Tarapaca, Antofagasta, Atacama, Coquimbo, Rest of Chile-Biobio, La Araucania, Maule, O‘Higgins, Santado, Valpariso, Chiloe, Aisen, Magallanes. Valparaiso, Maule, Biobio, La Araucania. Los Lagos, Aisen, Magallanes.

**Agrostis liebmannii** (Fourn.) Hitchc. *N. Amer. Fl.* 17(7):519 (1937).


**TYPE** from Mexico. **Basionym or Replaced Name:** *Apera liebmannii* P. Fourn., *Gram. Mexic.* 97 (1886). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Mexico, Orizaba: Botter 93 (P syn) ; Mexico, Chinantla: Liebmann 710 (C syn, US).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Frederik Michael Leibmann (1813–56), Danish botanist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.5 mm long, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.
**Florets.** Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex acute, muticous. Palea 0.9 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, 0.7 mm long, membranous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG). Continent.** North America, South America.

**Country /Province /State.** Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico. Western South America. Colombia.


**TYPE** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Based on Calamagrostis capillaris ; Brazil: Sellow 521 (B holo, K).

**Recent Synonyms:** Calamagrostis capillaris Nees ex Steud., Syn. Pl. Gram. 188. (1854).

**Illustrations (Books):** L.B. Smith, D.C. Wasshausen, R.M. Klein Flora Illusttrada Catarinensis Gramineas (1981–1982) (476, Fig. 102).

**Derivation** (Clifford & Bostock 2007): *L. longus*, long; barba, beard.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose, clumped densely. Culms 60–90 cm long, 0.5 mm diam. Ligule an eciliate membrane. Leaf-blades flat or conduplicate, 2 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, effuse, 8–30 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.9–1 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 2–3 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2–3 mm long. 1.5–1.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.6 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, muticous. Palea absent or minute.


**Distribution (TDWG). Continent.** South America.

**Country /Province /State.** Brazil. Brazil Southeast, Brazil South.


**Illustrations (Books):** S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 461).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Culms 15–30 cm long. Culm-nodes glabrous. Ligule an eciliate membrane, 5 mm long. Leaf-blades conduplicate or convolute, 3–
Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, 3–7 cm long, 0.5 cm wide. Primary panicle branches 1.8 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lancelolate, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate or elliptic, 2.5–3 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate or elliptic, 2.2–2.7 mm long, 1.5–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 1.5 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma apex acute, muticous. Palea absent or minute.

Flower and Fruit. Lodgeoles 2, membranous. Anthers 3, 0.75 mm long. Caryopsis with adherent pericarp. Hilum linear.


Agrostis magellanica Lam. Illustr. 1: 160 (1791).


TYPE from Chile. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Chile, Magellan: Commerson (P holo).


Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From the Straits of Magellan.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths light brown, persistent and investing base of culm, with fibrous dead sheaths. Basal innovations extravaginal. Culms erect or geniculately ascending or decumbent, 5–45 cm long. Ligule an eciliate membrane, 1.5 mm long, scaberulous on abaxial surface, erose, truncate. Leaf-blades flat or conduplicate, 2–16 cm long, 0.5–2 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle, aerial or shorter than basal leaves. Peduncle smooth or scaberulous above. Panicle contracted, lancelolate or elliptic, 2–10 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1.5–5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lancelolate, laterally compressed, 3.5–5 mm long, falling entire, deciduous with the pedicel. Floret callus pubescent, hairy in 2 tufts.


Florets. Fertile lemma ovate, 1.8–2.2 mm long, hyaline, without keel, 5 -veined, more than 3-veined.Lemma lateral veins extending close to apex. Lemma surface smooth or scaberulous, rough above or on veins. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way
up back of lemma, geniculate, 3–4 mm long overall, with twisted column. Palea 0.4–0.7 mm long, 0.25 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, 0.5–0.6 mm long, membranous. Anthers 3, 0.5–0.9 mm long. Caryopsis with adherent pericarp, 1.2–1.6 mm long. Hilum linear.

\( n = 42 \) (1 ref TROPICOS). \( 2n = 84 \) (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Australasia, South America, Antarctica.
Country /Province /State. New Zealand. Antipodes Is, New Zealand South I, Campbell Is, Auckland Is, Macquarie Is. Western South America, Southern South America. Colombia. Argentina South, Chile Central, Chile South. Subantarctic islands. Crozet Is, Falkland Is (Malvinas), Kerguelen, Macquarie Is, Marion-Prince Edward Is, South Georgia.

Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. La Araucania. Los Lagos, Aisen, Magellanes.


**Classification.** Subfamily Pooideae, Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending or decumbent, 25–90 cm long. Ligule an eciliate membrane, 3–5 mm long. Leaf-blades flat or involute, 5–25 cm long, 1.5–3.5 mm wide. Leaf-blade surface glabrous.

**Inflorescence**. Inflorescence a panicle. Panicle open, oblong or ovate, dense or loose, 2–10 cm long. Panicle branches flexuous, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.6–2 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.

**Glumes.** Glumes persistent, similar, subequal in width, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 3.5–5 mm long, 1 length of upper glume, membranous, 1-keeled, 1–2 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent or obscure. Lower glume surface smooth. Lower glume apex acute. Upper glume lanceolate, 3.5–5 mm long, 1.4–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume surface smooth. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2.5–3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface pilose. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.25 way up back of lemma, geniculate, 3–7 mm long overall, with twisted column. Palea 1 length of lemma, hyaline, 2 -veined. Rhachilla extension 0.2–0.3 length of fertile floret, pilose.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.

\( 2n = 28 \) (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa.

**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate, 8–12 cm long. Primary panicle branches appressed, 4–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 5–10 mm long, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.3–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 4.3–4.5 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface puberulous. Upper glume lanceolate, 4.1–4.2 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent or obscure. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 2.5–3 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins prominent, excurrent. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 6 mm long overall, with twisted column. Column of lemma awn 3 mm long. Palea 1–1.5 mm long, hyaline.

**Flower and Fruit.** Anthers 3, 1.5–2 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Western Indian Ocean. Madagascar.


**TYPE** from Chile. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: C. Skottsberg & I. Skottsberg 424, 14 Feb 1917, Chile: Juan Fernandez Islands: Masafuera, highland of Las Torres, alpine heath, ca. 1300 m (B; IT: BAA-4273 (fragm. ex B), K, P, SGO (fragm. ex B), US-1093816).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -anus, indicating location. From Mas Afuera an island close to Juan Fernandez.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle contracted, linear or oblong, 7–12 cm long, 1–2 cm wide. Panicle branches smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–4.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus sparsely hairy, hairy on the margins.

Florets. Fertile lemma elliptic, 1.5–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough on veins. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 0.5–1.2 mm long overall, not or scarcely exserted from spikelet. Palea 0.2–0.3 mm long, 0.1–0.15 length of lemma, 0 -veined. Palea apex dentate, 3 -fid.

Flower and Fruit. Lodicules 2, 0.4–0.5 mm long, membranous. Anthers 3, 0.8–1 mm long. Caryopsis with adherent pericarp, ellipsoid, 1–1.5 mm long. Hilum elliptic. Endosperm farinose.

Distribution (TDWG). Continent. South America.
Country /Province /State. Southern South America. Juan Fernandez Is.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.
Illustrations: None found.
Derivation (Clifford & Bostock 2007): L. middle. Characters midway between two or more other species.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 10–25 cm long. Ligule an eciliate membrane, 1.5–2 mm long, erose, obtuse. Leaf-blades filiform, convolute, 2–5 cm long, 0.5–1 mm wide. Leaf-blade apex acuminate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


Florets. Fertile lemma oblong, 0.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, awned, 1 -awned. Principal lemma awn subapical, straight, 0.5–1 mm long overall. Palea 0.75 length of lemma, hyaline.

Distribution (TDWG). Continent. Antarctica.
Country /Province /State. Subantarctic islands. Tristan de Cunha.


Illustrations: None found.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–3.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus sparsely hairy or pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3.5–3.8 mm long, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface hispidulous. Lower glume apex acute. Upper glume lanceolate, 3.5–3.8 mm long, 1.5–1.6 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 3 -veined. Upper glume surface hispidulous. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 2.2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface hirsute. Lemma apex entire, obtuse, muticous. Palea 0.25 length of lemma. Rachilla extension 0.25 length of fertile floret, pilose.


**Distribution (TDWG).** Continent. South America.

**Country/Province/State.** Northern South America. Venezuela.


**Derivation** (Clifford & Bostock 2007): in honor of Carl Heinrich Mertens (1796–1830) German-born physician and traveller.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 20–60 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades flat or involute, 5–10 cm long, 0.5–3 mm wide. Leaf-blade surface smooth or scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle open, pyramidal, 5–15 cm long. Primary panicle branches spreading, whorled at lower nodes, 1–4 cm long. Panicle axis smooth or scabrous. Panicle branches smooth or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Florets.** Fertile lemma elliptic, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight or geniculate, 2–4 mm long overall, without a column or with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.75–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear. 

2n = 41 (1 ref TROPICOS), or 56 (3 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Temperate Asia, North America, South America. Region. Northern Europe, Eastern Europe.

**Country /Province /State.** : Finland, Norway, Sweden. Central European Russia, East European Russia, North European Russia. Russian Far East, Eastern Asia. Kamchatka, Kuril Is, Magadan. Japan Hokkaido, or Honshu. Japan. Subarctic America, Western Canada, Eastern Canada, Northwest USA, Northeast USA, Southwestern USA, Southeastern USA, Mexico. Greenland. Central Mexico. Western South America, Southern South America. Colombia, Ecuador, Peru. Argentina South, Chile Central, Chile South. 


**Accepted by:** W.D. Clayton & K. Harman, GrassBase (2008) and online.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Stolons absent or present. Basal innovations intravaginal. Culms geniculately ascending, 30–50 cm long, rooting from lower nodes. Culm-internodes smooth, distally glabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 2–5 mm long. Leaf-blades flat or involute, 7–14 cm long, 1–2.3 mm wide, glaucous. Leaf-blade surface ribbed. Leaf-blade margins scaberulous or scabrous. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 7–10 cm long, 1–2 cm wide. Primary panicle branches appressed, whorled at most nodes. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–3 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 3–3.7 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florrets, firmer than fertile lemma, gaping. Lower lower lanceolate, 3–3.7 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower lower glume lateral veins absent. Lower lower glume surface scabrous. Lower lower glume apex acute. Upper upper glume lanceolate, 2.9–3.6 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper upper glume lateral veins absent. Upper upper glume surface scabrous. Upper upper glume apex acute.

**Florets.** Fertile lemma elliptic to oblong, 2.4–2.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, mucronate. Palea oblong, 1.4 mm long, 0.5 length of lemma, hyaline, 0–2 -veined.

**Flower and Fruit.** Anthers 3, 1.5–1.8 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Europe.

**Region. Southeastern Europe.**

**Country /Province /State.** : Greece.


**TYPE** from Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Chile, Santa Fernando: Coll? (LE holo).


**Classification.** Subfamily Pooidae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Rhizomes absent or short. Culms 2–18 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–2.5 mm long, erose, truncate or obtuse. Leaf-blades curved, filiform, conduplicate, 0.5–1.5 mm wide. Leaf-blade surface scabrous, rough adaxially or on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, 1–6.5 cm long, 0.3–0.7 cm wide. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.4–4.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma elliptic, 1.7–2.6 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, obtuse, muticous or mucronate or awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, straight, 1–2 mm long overall, not or scarcely exserted from spikelet. Palea 0.35–0.7 mm long, hyaline, 0 -veined.

**Flower and Fruit.** Lodicules 2, 0.25–0.55 mm long, membranous. Anthers 3, 0.5–0.8 mm long. Caryopsis with adherent pericarp, 1.1–1.6 mm long. Hilum linear.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Southern South America. Bolivia. Argentina South, Chile Central, Chile South. Falkland Is (Malvinas).


**Classification.** Subfamily Pooideae. Tribe: Poeae.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.75 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus glabrous.


Florets. Fertile lemma oblong, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, muticous. Palea 0.2–0.5 mm long, 0.1–0.33 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.6 mm long. Caryopsis with adherent pericarp.


Habit, Vegetative Morphology. Annual. Culms erect, 5–15 cm long. Leaf-sheaths longer than adjacent culm internode. Ligule an eciliate membrane, 2–2.5 mm long. Leaf-blades 1.5–6 cm long, 0.5–2.3 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, 3–6 cm long, 0.5–0.8 cm wide. Primary panicle branches appressed, 0.5–2 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus pilose. Spikelet callus hairs 0.15 length of lemma.


Florets. Fertile lemma oblong, 3.2–3.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.6 way up back of lemma, geniculate, 6–7 mm long overall, with twisted column. Palea 0.3 length of lemma, hyaline, 0 -veined, without keels.

**Agrostis montevidensis** Spreng. ex Nees. *Agrost. Bras.* 403 (1829).


**Derivation (Clifford & Bostock 2007):** L. -ensis, denoting origin. From Montevideo, Uruguay.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 20–80 cm long. Ligule an eciliate membrane, 1.5–3 mm long, erose. Leaf-blades 2–3 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, obovate, effuse, 10–30 cm long, 5–9 cm wide. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 10–45 mm long, smooth or scaberulous, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.8–2.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.8–2.4 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.8–2.4 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.5–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, straight, 2–2.5 mm long overall, without a column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.8 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Africa (*), South America. Country /Province /State. African (*). Mpumalanga, Swaziland, Kwazulu-Natal, Western Cape. Western South America, Brazil, Southern South America. Bolivia, Colombia. Brazil Southeast, Brazil South. Argentina NorthEast, Argentina Northwest, Chile Central, Paraguay, Uruguay.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus glabrous.


Florets. Fertile lemma oblong, 2.7–3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, muticous or mucronate or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 1–1.5 mm long overall. Palea present or absent or minute, 0–0.33 length of lemma, hyaline.

Flower and Fruit. Lodicles 2, membranous. Anthers 3, 0.6–0.8 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.3 mm long.


TYPE from Pakistan. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Pakistan, Shend Toi: *Aitchison 1252* (K holo).

Illustrations: None found.


Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 10–45(–70) cm long. Ligule an eciliate membrane, 2.5–4 mm long, obtuse. Leaf-blades 3–15 cm long, 1.5–5 mm wide. Leaf-blade surface smooth or scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open, linear or oblong, dense or loose or effuse, 3–15(–20) cm long. Primary panicle branches 2–3 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus pilose. Floret callus hairs 0.33 length of lemma.

Florets. Fertile lemma oblong, 1.2–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma apex erose, truncate, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.4–0.5 way up back of lemma, straight, 1–3 mm long overall. Palea 1 length of lemma, hyaline, 2 -veined.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.4–0.8 mm long. Stigmas 2, laterally exserted. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, cushion forming. Basal innovations extravaginal. Culms 1–6 cm long. Leaf-sheaths smooth. Ligule an eciliate membrane, 0.5–1.5 mm long, scabrous on abaxial surface, lacerate, truncate or acute. Leaf-blades spreading, curved, involute, 0.4–1.2 cm long, 0.2–0.4 mm wide. Leaf-blade surface ribbed, scabrous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Peduncle smooth. Panicle capitulate, ovate, 0.3–0.7 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 1.5–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


Florets. Fertile lemma ovate, 1.2–1.4 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure, extending close to apex. Lemma apex truncate, muticous. Palea 0.2–0.4 mm long, 0.2–0.25 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, 0.2–0.3 mm long, membranous. Anthers 3, 0.4–0.6 mm long. Caryopsis with adherent pericarp, 0.7–1 mm long. Hilum linear.

n = 21 (1 ref TROPICOS). 2n = 42 (1 ref TROPICOS).


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


**TYPE** from India. T:fide TROPICOS and Kew Synonomy Database: India, Kashmir, Musjid valley: Duthie 13267 (DD holo).

**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, robust, 80–160 cm long. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 10–30 cm long, 3–10 mm wide. Leaf-blade surface scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 15–30 cm long. Primary panicle branches not whorled or whorled at most nodes, naked below or bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, smooth.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus glabrous.

**Glumes.** Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acute. Upper glume lanceolate, 2 mm long, 1–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.8–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface puberulous. Lemma apex erose, muticous.

**Flower and Fruit.** Anthers 3, 0.5–0.8 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.
**Country /Province /State.** China. Indian Subcontinent, Indo-China. Assam, Eastern Himalaya, India, West Himalaya.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 25–50 cm long, 2–3 -noded. Culm-internodes smooth. Leaf-sheaths scaberulous, glabrous on surface. Ligule an eciliate membrane, 1.5–3.5 mm long, erose. Leaf-blades flat, 3–10 cm long, 1–3.5 mm wide. Leaf-blade surface scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 12–20 cm long, 6–10 cm wide. Primary panicle branches 10–15 -nate, whorled at most nodes. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 5–12 mm long, 4–7 length of fertile spikelet.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.3–1.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.3–1.7 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 1.3–1.7 mm long, 2–3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

**Florets.** Fertile lemma elliptic, 0.4–0.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, muticus. Palea 0.4–0.6 mm long, 0.75–1 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent: Europe, Africa, South America. Region. Northern Europe (*). Southwestern Europe.


Buenos Aires.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: *Royle 67* (LE ssn); India: *Royle 70* (LE ssn).


**Derivation** (Clifford & Bostock 2007): L. *nervus*, nerve; *-osa*, abundance. With conspicuous nerves in the glumes or lemmas.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 20–45 cm long, 2–3-noded. Culm-nodes brown. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 6–8 cm long, 1–2 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acuminata.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate or pyramidal, 3–12 cm long, 0.5–6 cm wide. Primary panicle branches whorled at lower nodes. Panicle branches capillary, smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–3 mm long, smooth or scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.7–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous or pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume elliptic or oblong, 2.7–3.5 mm long, 1 length of upper glume, membranous, mid-green or purple, 1-keeled, 1-veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute or acuminate.

**Pedicles**. Fertile lemma oblong or ovate, 1.5–2.4 mm long, hyaline, without keel, 5-veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma surface scaberulous. Lemma apex erose, truncate, muticous. Palea 0.5–0.8 mm long, 0.33 length of lemma, hyaline, 0-veined.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

\[ n = 14 \] (2 refs TROPICOS).  

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


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**TYPE** from Spain. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Spain, Sierra Nevada: Coll?

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 6–60 cm long. Culm-internodes antrosely scabrous. Leaf-sheaths without keel, smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, 4–6 mm long, entire or lacerate. Leaf-blades filiform, 5–15 cm long, 0.5–0.8 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade apex obtuse or abruptly acute.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 5–10 cm long. Primary panicle branches ascending or spreading, whorled at most nodes. Panicle axis scabrous. Pedicles present, scaberous, tip rectangular.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.4 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2–2.5 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1-veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2–2.5 mm long, 1.2 length of adjacent fertile lemma, membranous, purple, 1-

**Florets.** Fertile lemma oblong, 1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 3–3.5 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.2 mm long, yellow. Caryopsis with adherent pericarp, oblong, sulcate on hilar side, 1.4–1.5 mm long, light brown. Embryo 0.25–0.33 length of caryopsis. Hilum elliptic.

$2n = 42$ (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa.
Region. Southwestern Europe.


**TYPE** from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Gissar range, Ak-Tash Pass: Grigoriev et al. (LE holo).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms 15–40 cm long. Culm-internodes smooth. Culm-nodes black. Lateral branches lacking. Ligule an eciliate membrane, 0.7–1.5 mm long, obtuse. Leaf-blades 1–1.5 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 4–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.3–0.4 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume oblong, 2 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 2 mm long, 1.1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 1.8–1.9 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 2–2.5 mm long overall, with twisted column. Palea 0.5–0.66 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.7 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Temperate Asia.
Country /Province /State. : Middle Asia. Turkmenistan.


**Illustrations (Books):** T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (198, Fig. 69).

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Nippon, that is, Japan.
**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent. Culms 40–70 cm long, 1.5–2.2 mm diam., 3–4 -noded. Leaves basal and cauline. Ligule an eciliate membrane, 1–3 mm long, truncate. Leaf-blades 7–17 cm long, 3–5 mm wide. Leaf-blade surface scabrous, rough on both sides.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered if two-flowered then a spikelet base of the upper, sterile. Spikelets elliptic, laterally compressed, 3.3–3.6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 3 mm long, 1 length of upper glume, membranous, 1 -keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3 mm long, 0.8–0.9 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 3.3–3.6 mm long, hyaline, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma apex obtuse, muticous. Palea 0.15 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.7–1 mm long. Caryopsis with adherent pericarp, obovoid, 1.5 mm long. Hilum linear. Endosperm farinose.

**Distribution (TDWG).** Continent: Temperate Asia.


**Derivation** (Clifford & Bostock 2007): L. -ana, indicating location. From Novo Galicia, that is New Mexico.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle open, obovate, 15 cm long. Primary panicle branches ascending, 2–3 -nate, 5–8 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 3–5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, with lower narrower than upper, exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume elliptic, 3 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 3 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 3 mm long, cartilaginous, without keel. Lemma apex obtuse, muticous. Palea 1 length of lemma, hyaline. Rhachilla extension 0.5 mm long.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.7–2 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent: North America.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

Type from Madeira. T: Type of Basionym: fide TROPICOS and Kew Synonomy Database: Madeira, Pico dos Arrieros: Mandon 273 (K iso).

Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus sparsely hairy.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2–2.5 mm long, 1 length of upper glume, membranous, without keels, 1 -veined. Lower glume primary vein smooth. Lower glume lateral veins absent. Lower glume apex erose, truncate. Upper glume lanceolate, 2–2.5 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex erose, truncate.

Florets. Fertile lemma ovate, 1–1.2 mm long, hyaline, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma lateral veins excurrent. Lemma apex erose, truncate, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 0.5 mm long overall. Palea 0.5 length of lemma, hyaline, 2 -veined. Palea apex obtuse.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.2 mm long. Caryopsis with adherent pericarp. Hilum linear.


Country /Province /State. Macaronesia. Madeira.


Type from Turkey. Basionym or Replaced Name: Calamagrostis olympica Boiss., Diagn. Ser. (1) 5: 70 (1844). T: Type of Basionym: fide TROPICOS and Kew Synonomy Database: Turkey, Olympi Bythyni: Boissier (G holo, K).


Derivation (Clifford & Bostock 2007): L. ica, belonging to. From Mt Olympus, north-west Turkey.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 4–20 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.7–2 mm long. Leaf-blades filiform, 1–8 cm long, 0.6–2.4 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, linear or lanceolate, dense, 1–4 cm long, 0.2–0.8 cm wide. Primary panicle branches ascending, 0.8–1.5 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 0.3–2 mm long, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–2.3 mm long, breaking up at
maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 1 length of lemma.

**Glumes.** Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume ovate, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1.5–2.3 mm long, 1–1.1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.5–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 2–4 mm long overall, with twisted column. Palea 1 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.3–0.5 mm long. Stigmas 2, laterally exserted. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.

**Distribution (TDWG).** Continent. Temperate Asia. Country /Province /State. Middle Asia, Caucasus, Western Asia. Kazakhstan, Turkmenistan. Iran, Iraq.


**TYPE** from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database: USA, Oregon, Mt. Hood; Howell (US holo, K, LE).


**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Oregon State, USA.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–80 cm long. Lateral branches lacking. Ligule an eciliate membrane, 2–4 mm long, erose or lacerate, obtuse or acute. Leaf-blades 2–4 mm wide. Leaf-blade surface scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, 10–30 cm long. Primary panicle branches ascending or spreading, whorled at most nodes, 5–10 cm long. Panicle branches stiff. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex muticous. Palea 0.2 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, 0.3 mm long, membranous. Anthers 3, 0.4–0.6 mm long. Caryopsis with adherent pericarp. Hilum linear.


**Illustrations**: None found.

**Derivation** (Clifford & Bostock 2007): Gk *oresbios*, mountain dweller. Alpine or subalpine species.

**Classification**: Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology**: Perennial, caespitose. Stolons absent or present. Basal innovations intravaginal. Culms 5–25 cm long. Leaf-sheaths smooth. Ligule an eelliuate membrane, 1–4.5 mm long, glabrous on abaxial surface, entire or erose, truncate or obtuse. Leaf-blades flat or conduplicate, 2–7 cm long, 1.5–2 mm wide. Leaf-blade surface smooth or scaberulous, rough adaxially. Leaf-blade margins smooth or scaberulous. Leaf-blade apex abruptly acute.

**Inflorescence**: Inflorescence a panicle. Peduncle smooth. Panicle open, oblong or pyramidal, 2–6 cm long. Primary panicle branches spreading. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, smooth or scaberulous.

**Fertile Spikelets**: Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes**: Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 2–2.5 mm long, 1–1.2 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Upper glume lanceolate, 1.7–2.5 mm long, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets**: Fertile lemma ovate, 1.5–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure, extending close to apex. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight or geniculate, 2–3 mm long overall, without a column or with twisted column. Palea 0.5 mm long, 0.25–0.33 length of lemma, hyaline.

**Flower and Fruit**: Lodicles 2, 0.3 mm long, membranous. Anthers 3, 0.6–0.9 mm long. Caryopsis with adherent pericarp, 1.5 mm long. Hilum linear.


**TYPE** from Canada. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Canada: Hooker (LE holo).


**Classification**: Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology**: Perennial. Rhizomes elongated, wiry. Culms erect, 15–30 cm long. Ligule an ecellate membrane, 1–3 mm long, entire or erose, obtuse. Leaf-blades involute, 10–20 cm long, 1.5–3 mm wide. Leaf-blade apex attenuate.

**Inflorescence**: Inflorescence a panicle. Panicle contracted or spiciform, lanceolate, 3–10 cm long, 1–1.5 cm wide. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets**: Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–0.5 mm long.

Florets. Fertile lemma elliptic, 2.4–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex truncate, muticous. Palea absent or minute.

Flower and Fruit. Lodicules 2, 0.3–0.4 mm long, membranous. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp.


TYPE from New Zealand. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: : Based on A. muelleri var. paludosa ; New Zealand, Mt. Cook: Cheeseman (W lecto).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. pallesco, become pale. Losing color at maturity, especially spikelets.


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Basal innovations extravaginal. Culms erect, 3–5 cm long. Ligule an e ciliate membrane, 0.1–0.6 mm long, glabrous on abaxial surface, erose, truncate. Leaf-blades filiform, involute, 0.5–2.5 cm long, 0.2–0.4 mm wide. Leafblade surface scaberulous, rough adaxially.

Inflorescence. Inflorescence a panicle. Peduncle smooth. Panicle open, ovate or pyramidal, 0.6–2 cm long, bearing few spikelets. Primary panicle branches bearing 1 fertile spikelets on each lower branch. Panicle branches puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 1.5–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1.2–1.8 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 1.2–1.8 mm long, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Fertile lemma ovate, 1.2–1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure, extending close to apex. Lemma apex truncate or obtuse, muticous. Palea 0.4–0.6 mm long, 0.33 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, 0.2–0.4 mm long, membranous. Anthers 3, 0.4–0.7 mm long. Caryopsis with adherent pericarp, 1 mm long. Hilum linear.


Derivation (Clifford & Bostock 2007): *L. parvus*, small; *flos*, flower. Spikelets small or with few florets.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 1.5–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


Florets. Fertile lemma lanceolate, 1.3–1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex truncate, muticous. Palea absent or minute.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.3–0.4 mm long. Caryopsis with adherent pericarp, ellipsoid. Hilum linear.

$\text{n} = 21$ (1 ref TROPICOS).


Region. Northern Europe (*).


Tablelands.


TYPE from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Pamir, Djangalik: *Paulsen 1266* (LE iso).

Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.8–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.
**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.8–2.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.8–2.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 1.7–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, curved, 1.5–3 mm long overall. Palea 0.75 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.7–1.2 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Middle Asia, Western Asia. Turkmenistan. Iran.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India: Wight 1746 .


**Derivation** (Clifford & Bostock 2007): L. -aris, pertaining to. From peninsula India.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect, 20–80 cm long. Culm-nodes glabrous. Ligule an eciliate membrane, 1–3 mm long, truncate. Leaf-blades linear or lanceolate, 3–15 cm long, 1–5 mm wide, mid-green or glaucous. Leaf-blade apex acute or acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3–4 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.5–3 mm long, 1.3–1.4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 2–3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 4–6 mm long overall, with twisted column. Palea 2–2.5 mm long, 0.9–1 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.5–1.25 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India.

Kerala. Tamilnadu.


**TYPE** from USA. *Basionym or Replaced Name:* Cornucopiae altissimum Walt., *Fl. Carol.* 74 (1788). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: USA, South Carolina: Walter.


Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, weak, 50–100 cm long, 0.7–1 mm diam. Lateral branches lacking. Leaves cauline. Leaf-sheaths ribbed, smooth, glabrous on surface. Ligule an eciliate membrane, 2–5 mm long, lacerate. Leaf-blades 6–13 cm long, 1.5–3 mm wide. Leaf-blade surface ribbed, scaberulous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2.2–2.9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume oblong, 2.2–2.9 mm long, 1.1–1.2 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex caudate. Upper glume oblong, 1.9–2.3 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex caudate.

Florets. Fertile lemma ovate, 1.7–1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure, extending close to apex. Lemma apex erose, truncate, muticous. Palea absent or minute.

Flower and Fruit. Lodicles 2, membranous. Anthers 3, 0.8–1 mm long, purple. Caryopsis with adherent pericarp. Hilum linear.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. masked*, that is, resembling something else. Readily confused with another species.


membrane, 0.8–2 mm long, scaberulous on abaxial surface, erose, truncate or obtuse. Leaf-blades flat or conduplicate or involute, 2–8 cm long, 0.5–1.5 mm wide, flaccid. Leaf-blade surface scabrous, rough adaxially or on both sides. Leaf-blade margins smooth or scaberulous. Leaf-blade apex acute.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma ovate, 1.4–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex entire or erose, truncate, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.66 way up back of lemma, straight, 1–3 mm long overall. Palea 0.3–0.6 mm long, 0.25 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, 0.3–0.6 mm long, membranous. Anthers 3, 0.4–0.7 mm long. Caryopsis with adherent pericarp, 1–1.5 mm long. Hilum linear.

2n = 42 (1 ref TROPICOS).

**Distribution (TDWG), Continent.** Australasia.
**Country /Province /State.** New Zealand. New Zealand North I, New Zealand South I, Stewart Is.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 30–55 cm long. Leaf-sheaths smooth or scaberulous. Ligule an eciliate membrane, 1–4.5 mm long, scaberulous on abaxial surface, erose, truncate or obtuse. Leaf-blades filiform, involute, 4–10.5 cm long, 0.3–1 mm wide, stiff. Leaf-blade surface scabrous, rough abaxially. Leaf-blade apex obtuse.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.5–3.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


Florets. Fertile lemma ovate, 2–2.6 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate or obtuse, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 2–3 mm long overall. Palea 0.2–0.4 mm long, 0.1–0.15 length of lemma, hyaline.
**Flower and Fruit.** Lodicules 2, 0.2–0.4 mm long, membranous. Anthers 3, 1.3–1.7 mm long. Caryopses with adherent pericarp, 1.5 mm long. Hilum linear.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** New Zealand. New Zealand South I.

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**Type** from Chile. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Based on A. clausa Phil. : Chile, Patagonia, Rio Aysen: Simpson (SGO holo).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or short. Culms 35–45 cm long. Leaf-sheaths tight, 2–9 cm long, smooth. Ligule an eciliate membrane, 1.5–2 mm long, truncate. Leaf-blades 2–6 cm long, 1–2 mm wide, stiff. Leaf-blade surface smooth or scaberulous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.1–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous or sparsely hairy.


**Florets.** Fertile lemma elliptic, 1.6–1.7 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma apex truncate, mucronate. Principal lemma awn subapical. Palea 1–1.2 mm long, hyaline.

**Flower and Fruit.** Lodicules 2, 0.6 mm long, membranous. Anthers 3, 1.2 mm long. Caryopsis with adherent pericarp, 1.3 mm long. Hilum linear.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Southern South America. Argentina South, Chile Central, Chile South. Chubut, Neuquén, Río Negro, Santa Cruz. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Maule. Los Lagos, Aisen, Magellanes.

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**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. "ana", indicating connection. In honor of Robert Knuds Friedrich Pilger (1876–1953) German agrostologist, born on Helgoland before its transfer from British to German administration.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Stolons present. Culms decumbent, 7–100 cm long. Ligule an eciliate membrane, 4 mm long. Leaf-blades flat, 5–14 cm long, 1–3 mm wide. Leaf-blade surface smooth or scaberulous, glabrous.
Inflorescence. Inflorescence a panicle. Panicle open, linear or oblong, loose or effuse, 10–20 cm long. Primary panicle branches ascending or spreading, 2–3 -nate. Panicle branches capillary, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


Florets. Fertile lemma elliptic, 1.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.6–0.7 way up back of lemma, straight, 2–4 mm long overall, with a straight or slightly twisted column. Palea 0.9 length of lemma, hyaline, 2 -veined.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.6 mm long. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.

Flower and Fruit. Lodicules 2, lanceolate, 0.5 mm long, membranous, acute. Anthers 3, 0.6–1.2 mm long. Caryopsis with adherent pericarp, 1.3–1.8 mm long.


Derivation (Clifford & Bostock 2007): L. pilus, a hair; -osa, abundance. -ula, diminutive.


Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 30–75 cm long, without nodal roots or rooting from lower nodes. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliat e membrane, 4–6 mm long. Leaf-blades 15–30 cm long, 2–3 mm wide. Leaf-blade surface scaberulous, rough on both sides, glabrous or pubescent, sparsely hairy, hairy adaxially. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, lanceolate or ovate, dense or loose or effuse, (5–)10–30 cm long. Primary panicle branches 2–5 -nate, whorled at most nodes. Panicle branches flexuous, smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, smooth, tip widened.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret.


Florets. Fertile lemma elliptic, 1.5–3.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excorant or extending close to apex. Lemma surface pubescent. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, geniculate, 4–6 mm long overall, with twisted column. Palea 0.25–0.33 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.75–1.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

n = 21 (2 refs TROPICOS).


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms 30–60 cm long, 0.5–1 mm diam., 3 -noded. Culm-nodes purple. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, 2.5–3.5 mm long. Leaf-blades filiform, conduplicate, 7–15 cm long, 0.6–1 mm wide. Leaf-blade surface ribbed, scaberulous, rough abaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 9–11 cm long, 0.5–1 cm wide. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 1–2 length of fertile spikelet, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.9–3.9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume oblong, 2.9–3.9 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Upper glume apex acute. Upper glume oblong, 2.8–3.4 mm long, 1.5–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 1.9–2 mm long, hyaline, without keel. Lemma lateral veins obscure, extending close to apex. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 2–3 mm long overall, without a column. Palea 0.7–1.1 mm long, 0.33–0.5 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.2–1.5 mm long, purple. Caryopsis with adherent pericarp. Hilum linear.

2n = 42 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica. Costa Rica.

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**Derivation** (Clifford & Bostock 2007): *L. -ense*, denoting origin. From La Plata Province, Argentina, or Platte River between Uruguay and Argentina.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or oblong, 12–25 cm long, 1–3 cm wide. Primary panicle branches appressed, 2–6 -nate, 2–5 cm long. Panicle axis smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1 length of fertile spikelet, scabrous, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

FLORETS. Fertile lemma ovate, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, straight, 1–2 mm long overall, not or scarcely exserted from spikelet. Palea 0.8 mm long, hyaline, 0 -veined.

FLOWER AND FRUIT. Lodicules 2, membranous. Anthers 3, 0.8 mm long. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. South America.

Agrostis polypogonoides Stapf. Fl. Cap. 7: 549 (1899).


Type from South Africa. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Coast Region: Cape Div.; Muizenburg Vlei, Wolley Cod 2349.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling Polypogon with respect to the inflorescence.


Inflorescence. Inflorescence a panicule. Panicle open, lanceolate or elliptic, 10–16 cm long, contracted about primary branches. Primary panicle branches bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform or linear, 0.5–2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4–5 mm long, falling entire, deciduous with the pedicel. Floret callus pubescent.


FLORETS. Fertile lemma oblong, 2 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 3 mm long overall, with twisted column. Palea 1 length of lemma, hyaline, 2 -veined.


Country/Province/State. Southern Africa. Northern Cape, Western Cape.


TYPE from Kenya, Tanzania. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Mau plateau: F.D. 14 (B syn, EA); Tanzania, Kilimanjaro: Volkens 1156 (B syn).

Illustrations (Books): R.M.Polhill, F.T.E.A., Gramineae (1(1970):109, Fig.36), G.V.Pope et al., Flora Zambesiaca 10 (1(1970):109, Fig. 36).


Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3.5–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.


Florets. Fertile lemma oblong, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface pilose. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.25 way up back of lemma, geniculate, 4–7 mm long overall, with twisted column. Palea 1 length of lemma, hyaline, 2 -veined. Palea apex with excurrent keel veins. Rachilla extension 0.3–0.7 length of fertile floret (1–3mm), pilose, hairy below.


Derivation (Clifford & Bostock 2007): L. near to. Similar to another species.


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes absent or short. Culms erect or geniculately ascending, slender, 40–80 cm long, 4 -noded. Leaf-sheaths smooth or scaberulous. Ligule an eciliate membrane, 2–5 mm long, erose. Leaf-blades flat or involute, 1.5–4 mm wide. Leaf-blade surface ribbed, grooved adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or ovate, 10–35 cm long, with spikelets clustered towards branch tips. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.8–2 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1.8–2 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -
veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.8–2 mm long, 1–1.4 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma oblong, 1.25–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex emarginate or truncate, muticous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 0.3–0.5 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. New South Wales, A.C.T., Victoria. Tablelands.


**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect, 30 cm long, 0.5–0.7 mm diam., 3–4 -noded. Culm-internodes smooth. Leaves cauline. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2–5 mm long, lacerate, obtuse. Leaf-blades flat or involute, 7–9 cm long, 1.5 mm wide. Leaf-blade surface scaberulous. Leaf-blade margins scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 7–12 cm long, 3–8 cm wide. Primary panicle branches spreading, 2 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–4.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3.5–4.4 mm long, 1.1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3.5–4.4 mm long, membranous, purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic, 2.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 4–5 mm long overall, with twisted column. Palea 0–0.2 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3. Caryopsis with adherent pericarp, oblong, 1.7–1.8 mm long. Hilum linear.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China South Central. Sichuan.

**Agrostis quinqueseta** (Steud.) Hochst. *Flora* 38:285 (1855).

**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Derivation** (Clifford & Bostock 2007): *L. quinque*, five; *seta*, bristle. Lemma five-awned.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes short. Culms erect, 15–70 cm long. Ligule an eciliate membrane. Leaf-blades 4–25 cm long, 2–4 mm wide, stiff. Leaf-blade surface glabrous or pilose, sparsely hairy.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension or with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.


Florets. Fertile lemma ovate, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lower glume primary vein scaberulous. Lower glume surface scabrous. Lower glume apex acute. Upper glume lanceolate, 1.4–1.8 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume surface scabrous. Upper glume apex acute.

Flower and Fruit. Lodicles 2, membranous. Anthers 3, 0.9–1.2 mm long. Caryopsis with adherent pericarp. Hilum linear. Endosperm farinose.


Region. Southwestern Europe.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending. 35–70 cm long, 3–5 -noded. Culm-internodes smooth. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 2.5–4.5 mm long, lacerate, obtuse. Leaf-blades flat, 5–17 cm long, 1–2.5 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or ovate, effuse, 10–20 cm long, 2–8 cm wide. Primary panicle branches 2–6 -nate, whorled at most nodes. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–7 mm long, 1.1–1.4 length of fertile spikelet.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.4–1.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.

**Accepted by:** T. Koyama, *Grasses of Japan and its neighboring regions* (1987).


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes absent or short. Basal innovations extravaginal or intravaginal. Culms erect or geniculately ascending, 40–85 cm long, rooting from lower nodes. Leaf-sheaths smooth. Ligule an eciliate membrane, 4–7 mm long, erose, truncate or obtuse or acute. Leaf-blades flat or involute, 10–25 cm long, 3–6.5 mm wide. Leaf-blade surface smooth or scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, lanceolate or elliptic, 15–30 cm long. Primary panicle branches 2–11 cm long. Panicle branches smooth or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 1.5–4.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.1–0.3 mm long. 0.1 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.5–4.1 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 1.4–4 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminata.

**Florets.** Fertile lemma oblong, 1.2–3.25 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate or obtuse or acute, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.3–0.8 way up back of lemma, geniculate, 2–4 mm long overall, with twisted column. Palea 0.1–2 mm long, 0.1–0.75 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.55–1.4 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG). Continent.** Temperate Asia, Tropical Asia.


**Accepted by:** W.D. Clayton & K. Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–40 cm long. Ligule an eciliate membrane, 2 mm long. Leaf-blades 5–8 cm long, 2–3 mm wide. Leaf-blade surface scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, effuse, 10–15 cm long, 6–12 cm wide. Primary panicle branches spreading, whorled at lower nodes, 5–6 cm long. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, flexuous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.2 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate or ovate, 2–2.2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate or ovate, 2–2.2 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.5 mm long, hyaline, without keel. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 1.5 mm long overall, with twisted column. Palea 1.3 mm long, 0.75 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.8–1 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent: North America.
Country /Province /State: Mexico. Northeast Mexico.
Durango, Zacatecas.


**Derivation** (Clifford & Bostock 2007): in honor of Edith A. Ross (fl. 1885–95) United States amateur botanist.

**Classification.** Subfamily Pooideae. Tribe: Poecae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 9–15 cm long. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths loose. Ligule an eciliate membrane, 1–2 mm long, erose. Leaf-blades flat or conduplicate, 1–2.5 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 5–6 cm long, with spikelets clustered towards branch tips. Primary panicle branches ascending, whorled at most nodes. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex dentate, 4 -fid, truncate, muticous. Palea 0.6 mm long, 0.4–0.5 length of lemma, hyaline.

**Flower and Fruit.** Lodiceles 2, membranous. Anthers 3, 0.4–0.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent: North America.
Country /Province /State: Northwest USA. Wyoming.


**TYPE** from Italy. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Italy: Coll?.


**TYPE** from Italy. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Italy: Coll?.
Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *rupes*, rock; *-estre*, place of growth; Growing amongst rocks.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 10–20 cm long, 2(–3) -noded. Culm-internodes smooth. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 1.5–2 mm long, lacerate, acute. Leaf-blades filiform, convolute, 1.5–5 cm long, 1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 3–5 cm long, 1–3 cm wide. Primary panicle branches ascending, 3–5 -nate, whorled at most nodes. Panicle axis smooth. Panicle branches smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 1.5–3.5 mm long, 0.75–1 length of fertile spikelet.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


Florets. Fertile lemma elliptic, 1.8–2.2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 5 mm long overall, with twisted column. Palea 0.2 mm long, 0.1 length of lemma, hyaline.

Flower and Fruit. Lodiceules 2, membranous. Anthers 3, 1–1.3 mm long. Caryopsis with adherent pericarp, 1.5 mm long. Hilum linear.

2n = 14 (2 refs TROPICOS).


Region. Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.

Country /Province /State. : Austria, Czechoslovakia, Germany, Switzerland. : Corsica, France, Spain. : Albania, Bulgaria, Italy, Romania, Yugoslavia. Northwest European Russia, Ukraine. Northern Africa. Morocco.


Accepted by: W.D.Clayton & K.Harman. *GrassBase* (2008) and online.


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 4–5 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 4–5 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -

**Florets.** Fertile lemma oblong, 2.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 3–3.5 mm long overall, with twisted column. Palea ovate, 0.3 mm long, 0.15 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Caryopsis with adherent pericarp, 1.7 mm long. Embryo 0.2–0.25 length of caryopsis.


**TYPE** from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Urals, Khalilovo: Litvinov 2690 (LE holo).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms erect or geniculately ascending, 20–70 cm long. Culm-internodes smooth. Ligule an eciliate membrane, 2.5–4.5 mm long. Leaf-blades filiform, involute, 0.5–2 mm wide. Leaf-blade surface scabrous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 4–8 cm long, 0.5–1 cm wide. Primary panicle branches appressed, 3–5 -nate. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2 mm long, 1.3–1.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.2–1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex truncate, muticous. Palea 0.7 mm long, 0.5 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.


**Country /Province /State.** Central European Russia, East European Russia, South European Russia. Siberia. West Siberia.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

**TYPE** from Hawaii. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Hawaii, Maui & Oahu: Coll?.


**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From the Sandwich, now Hawaiian Islands.

**Classification.** Subfamily Pooideae. Tribe: Poeae.
**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 30–50 cm long. Culm-internodes antorsely scabrous. Leaf-sheaths antorsely scabrous. Ligule an eciliate membrane, 3 mm long, acute. Leaf-blades involute, 1–2 mm wide. Leaf-blade surface scabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


**Florets.** Fertile lemma oblong, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 0.5–4 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3. Caryopsis with adherent pericarp.


**TYPE** from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: North America: Coll?.


**Derivation** (Clifford & Bostock 2007): L. rough or gritty to the touch. Plants with rough leaf-blades, spikelets or stems.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit. Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–60 cm long. Ligule an eciliate membrane, 1.5–4 mm long. Leaf-blades 0.5–3 mm wide.

**Inflorescence.** Inflorescence a panicle, deciduous as a whole. Panicle open, ovate, effuse, 7–30 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading, rebranched above middle, 5–15 cm long. Panicle branches capillary, flexuous, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2.2–3 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume lanceolate, 2.2–3 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma oblong, 0.9–1.2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex muticous. Palea absent or minute.
Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.6 mm long. Caryopsis with adherent pericarp. 

$2n = 42$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe, Temperate Asia, North America, South America.

Region. Northern Europe (*), Middle Europe, Eastern Europe.


TYPE from Colombia. T:<Type of Basionym> fide TROPICOS and Kew Synonomy Database: Colombia, Santander: Cuatrecasas et al. 12608 (US holo).

Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 55 cm long. Culm-internodes antrorsely scabrous. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, scaberulous. Ligule an eciliate membrane, 2.5–5 mm long, scaberulous on abaxial surface, entire or erose, obtuse or acute. Leaf-blades erect, 10–15 cm long, 2–3 mm wide, stiff. Leaf-blade surface scabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.8–3 mm long, breaking up at maturity, disarticulating below each fertile floret.


Florets. Fertile lemma elliptic, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, curved, 4 mm long overall. Palea absent or minute.

Flower and Fruit. Lodicules 2, 0.7 mm long, membranous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.


**TYPE** from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Mexico, Tacubaya: Schaffner 308 (P syn); Mexico, Valle de Mexico: Schaffner 86 (LE syn).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Wilhelm Darmstadt Schaffner (1802) who collected in Mexico.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, oblong, 15–30 cm long. Primary panicle branches ascending or spreading, whorled at most nodes, 6–12 cm long. Panicle axis scabrous. Panicle branches stiff, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret.


**Florets.** Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, muticous. Palea absent or minute.


**Distribution (TDWG).** Continent. North America.

**Country/Province/State.** Mexico. Central Mexico, Northeast Mexico, Southwest Mexico.


**TYPE** from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: South Africa: Schlechter 10274 .

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms 3–65 cm long. Ligule an eciliate membrane. Leaf-blades 1–10 cm long, 2–2.5 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3–3.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3–3.5 mm long,
1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1-veined. Upper glume lateral veins absent. Upper glume apex acuminata.

**Florets.** Fertile lemma oblong, 2–2.5 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface pilose. Lemma apex dentate, 4-fid, truncate, awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 4 mm long overall, with twisted column. Palea 0.66 length of lemma, hyaline, 2-veined. Rachilla extension 1.5–2.5 mm long, 0.5–0.75 length of fertile floret, pilose.


**Distribution (TDWG).** Continent. Africa.
Country /Province /State. Southern Africa. Western Cape.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


Illustrations: None found.

**Derivation** (Clifford & Bostock 2007): in honor of Johann Christoph Schleicher (1768–1834) Swiss botanist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 10–30 cm long. Culm-internodes smooth. Ligule an eciliate membrane, 2–4 mm long, acute. Leaf-blades filiform, 5–10 cm long, 0.5–1.5 mm wide. Leaf-blade surface scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear or lanceolate, 1–6 cm long. Primary panicle branches appressed. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.3 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3–5 mm long, 1.3–1.5 length of upper glume, membranous, pallid, 1-keeled, 1-veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2–4 mm long, 1 length of adjacent fertile lemma, membranous, pallid, 1-keeled, 1-veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2–4 mm long, hyaline, without keel, 5-veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn dorsal, arising 0.05 way up back of lemma, geniculate, 5 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.5–2 mm long. Caryopsis with adherent pericarp. Hilum linear.

2n = 42 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe.
Region. Middle Europe, Southwestern Europe, Southeastern Europe.
Country /Province /State. : Austria, Germany, Switzerland. : France, Spain. : Italy.

**Agrostis schmidii** (Hook.f.) Bor. *Grasses Burma, Ceyl., Ind. & Pakist.* 389 (1960).


Illustrations: None found.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Rhizomes short. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms geniculately ascending, 20–25 cm long. Ligule an eciliate membrane. Leaf-blade base with a false petiole, petiole 0.3–0.5 cm long. Leaf-blades 5–7.5 cm long, 2–3 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile flop with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3–3.5 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3–3.5 mm long, 1.5–1.7 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface pilose. Lemma apex dentate, 4 -fid, with outer lobes longer, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 3–5 mm long overall, with a straight or slightly twisted column. Palea absent or minute.


**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India. Tamilnadu.

**Agrostis schneideri** Pilger. *Fedde, Repert.* 17: 130 (1921).

**TYPE** from China. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: China, Lichiang: Schneider 2326 (K iso).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Camillo Karl Schneider (1876–1951) German botanist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations intravaginal. Culms erect or geniculately ascending, 25–30 cm long, 1–2 -noded. Leaf-sheaths smooth. Ligule an eciliate membrane, 2–4 mm long. Leaf-blades flat or involute, 5–8 cm long, 1 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acute.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile flop with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


**Florets.** Fertile lemma oblong, 1–1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex dentate, 2 -fid, muticous. Palea absent or minute.
Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.


Accepted by: W.D Clayton & K.Harman, GrassBase (2008) and online.


Derivation (Clifford & Bostock 2007): Gk. skleros, hard; phyllon, leaf. Leaf-blades indurate or coriaceous.


Habit, Vegetative Morphology. Perennial, cushion forming. Culms erect, 2–6 cm long. Ligule an eciliate membrane. Leaf-blades aciculate, involute, 0.5–2 cm long, 0.5–1 mm wide, stiff.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume ovate, 2.5–3 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.2–2.7 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 1.5–2.25 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, muticous or mucronate. Principal lemma awn dorsal, arising 0.5 way up back of lemma. Palea 0.75 length of lemma, hyaline, 2 -veined.


Derivation (Clifford & Bostock 2007): in honor of A. Serrano (prior to 1886) who collected in South America.


Inflorescence. Inflorescence a panicle. Peduncle smooth. Panicle open, lanceolate, 8–20 cm long, 2–8 cm wide, with spikelets clustered towards branch tips. Primary panicle branches appressed or ascending, 2–
Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.3–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, hairy in 2 tufts. Floret callus hairs 0.5 mm long.


Florets. Fertile lemma elliptic, 1.7–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex muticous or aawned, 1 -awned. Principal lemma awn dorsal, arising 0.75 way up back of lemma, straight, 1–2 mm long overall. Palea 0.5–0.7 mm long, hyaline.

Flower and Fruit. Lodicules 2, 0.5–0.6 mm long, membranous. Anthers 3, 0.4–0.5 mm long. Caryopsis with adherent pericarp, sulcate on hilar side, 1–1.2 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.
Country /Province /State. Southern South America. Chile Central, Chile South.


Illustrations: None found.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

TYPE from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Ternej, Abrek: Schauflsjkaja (VLA holo).
Illustrations: None found.
Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 45–50 cm long, 1.5–2 mm diam. Culm-internodes smooth. Leaf-sheaths antrorse scabrous. Ligule an eciliate membrane, (2.5–)3.5–4.5 mm long. Leaf-blades 2–3.5 mm wide, grey-green. Leaf-blade surface scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, (2.7–)3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate,
(2.7–)3–3.5 mm long. 1.5–1.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 4.2 mm long overall, with twisted column.

**Flower and Fruit.** Anthers 3, 1.6–1.8 mm long.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Russian Far East. Primorye.


**TYPE** from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: China, Nilka Xian: Guan 3968.

**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms 20–50 cm long, 2–4 -noded. Leaves cauline. Leaf-sheaths mostly shorter than adjacent culm internode, smooth. Ligule an eciliate membrane, 2 mm long. Leaf-blades 4–10 cm long, 2–3 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 7–10 cm long, 0.3–1 cm wide. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–4.2 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate or oblong, 3.5–4.2 mm long, 1.1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate or oblong, 3.5–4.2 mm long, membranous, purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 2–3.2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 3 mm long overall, with twisted column. Palea 1.4–1.6 mm long, 0.66 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. Xinjiang.


**TYPE** from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: : Based on A. contracta Yang ; China, Yunnan, Bijiang Xian: Coll. 58618.

**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 470).

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate, 10–15 cm long, 3 cm wide. Primary panicle branches 5–10 -nate, whorled at most nodes. Panicle branches smooth, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, smooth, glabrous, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2.5–3 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.5–3 mm long, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.5–1.7 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, geniculate, 3 mm long overall, with twisted column. Palea 0.3 mm long, 0.2 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, oblong, 0.6 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central. Yunnan.

### Agrostis sinorupestris


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 469).

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, slender, 12–20(–30) cm long, 0.5 mm diam., 2–3 -noded. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule an eciliate membrane, 0.5 mm long, truncate or obtuse. Leaf-blades flat or involute, 3–15 cm long, 1–2 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate, 3–8 cm long. Primary panicle branches 2–6 -nate, whorled at most nodes, 2–4 cm long. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2.8–3.5 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.5–3.2 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 3.5–5 mm long overall, with a straight or slightly twisted column. Palea 0.4–0.6 mm long, 0.2–0.5 length of lemma, hyaline.

**Flower and Fruit.** Anthers 3, 0.6–0.8 mm long.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central, Tibet. Sichuan, Yunnan.

### Agrostis sodiroana


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret.


Florets. Fertile lemma elliptic, 1.8–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.75 way up back of lemma, straight, 2 mm long overall. Palea 1 mm long, 0.5 length of lemma, hyaline.


Distribution (TDWG). Continent. South America.
Country /Province /State. Western South America. Ecuador, Peru.


TYPE from Taiwan. T: <Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Taiwan, Sozan: Coll?.

Illustrations (Books): C-C Hsu, Flora of Taiwan, Vol 5 (1978) (248), C-C Hsu, Taiwan Grasses (1975), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 468).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Sozan, Taihoku, Taiwan.


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect or geniculately ascending, 45–90 cm long, 1–1.2(–2.5) mm diam., 3–5 -noded. Leaf-sheaths smooth. Ligule an eciliate membrane, 2–6 mm long, truncate or obtuse. Leaf-blades 7–20 cm long, 2–5 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex acuminately.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 1.8–2.7(–3) mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.1–0.2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume lanceolate, 1.8–3 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

Florets. Fertile lemma oblong or ovate, 1.3–2 mm long, hyaline, without keel, 4–5 -veined, more than 3-veined. Lemma apex truncate or obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.66
way up back of lemma, straight or curved, 1–2(–3) mm long overall. Palea 0.25–0.5 mm long, 0.25–0.33 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Anthers 3, 0.7–1.2 mm long.

**Distribution (TDWG).** Continent. Temperate Asia.


**Classification.** Subfamily Pooidaeae. Tribe: Poecae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Stolons present. Culms geniculately ascending or decumbent, 8–40 cm long, 2–5 -noded, rooting from lower nodes. Culm-internodes smooth. Leaf-sheaths without keel, smooth. Ligule an eciliate membrane, 1–6 mm long, obtuse. Leaf-blades 1–10 cm long, 0.5–5 mm wide. Leaf-blade surface ribbed, scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, linear or lanceolate or oblong, continuous or interrupted, dense or loose, 1–13 cm long, 0.4–2.5 cm wide. Primary panicle branches whorled at most nodes. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 0.5–2 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1–1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume

Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


**Illustrations:** None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.2–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.3 mm long, 0.25 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume linear or lanceolate, 1.05 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate or elliptic, 2.2–3.5 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong or ovate, 1.2–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex truncate, awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, straight, 0.2–2 mm long overall. Palea 0.66–1 length of lemma, hyaline, 2 -veined. Palea apex with excurrent keel veins. Rhachilla extension 0.5 mm long, pubescent, with 0.5 mm long hairs.

Flower and Fruit. Lodicules 2, linear, membranous, acute. Anthers 3, 0.2–0.5 mm long. Caryopsis with adherent pericarp, 0.8–1.4 mm long.


Country /Province /State. New Zealand. New Zealand North I, New Zealand South I.


Derivation (Clifford & Bostock 2007): L. sub, approaching.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Culms erect, 60–100 cm long, 3–4 -noded, with 0.5 of their length below uppermost node. Culm-internodes smooth. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 3–5 mm long. Leaf-blades involute, 1–1.3 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex hardened.

**Inflorescence.** Inflorescence a panicle. Panicle open, pyramidal, 12–18 cm long, 10–15 cm wide. Primary panicle branches spreading, whorled at most nodes, 6–8 cm long. Panicle axis smooth. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile flop with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5 mm long, breaking up at maturity, disarticulating below each fertile flop. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 2.5 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic, 2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, muticous. Palea 0.3 mm long, 0.1 length of lemma, hyaline.


**Distribution (TDWG).** Continent: North America, South America.

**Country /Province /State.** Mexico. Northeast Mexico. **Northern South America.** Western South America. Bolivia, Colombia, Ecuador. Chihuahua.


**TYPE** from New Zealand. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: New Zealand, Campbell's Is.: *Hooker* 1627 (K holo).

**Illustrations:** None found.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms 3–9 cm long. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 0.8–1 mm long, scaberulous on abaxial surface, erose. Leaf-blades involute, 1.5–4 cm long, 0.3–0.6 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex abruptly acute.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–3.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


Florets. Fertile lemma ovate, 1.3–1.6 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma margins scabrous. Lemma apex erose, truncate, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 1–2 mm long overall. Palea 0.3–0.4 mm long, 0.25 length of lemma, hyaline.

Flow and Fruit. Lodicules 2, 0.4 mm long, membranous. Anthers 3, 0.5–0.7 mm long. Caryopsis with adherent pericarp. Hilum linear.

\( n = 21 \) (1 ref TROPICOS).


Type from South Africa. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: South Africa, Doodmans Krans Mt.: *Galpin 6910* ; South Africa, Wittebergen: *Galpin 6911*.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *subulus*, fine sharp point; folium, a leaf. Leaf-blades narrow, tapering.


Habit, Vegetative Morphology. Perennial, caespitose. Culms weak, 5–30 cm long. Ligule an eciliate membrane. Leaf-blades filiform, conduplicate, 1–7 cm long, 0.5–1 mm wide, stiff.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear or lanceolate, 1.5–8 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


Florets. Fertile lemma oblong, 1.7–2.7 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex dentate, 4 -fid, truncate, muticous or awned. Principal...
lemma awn dorsal, arising 0.33 way up back of lemma, straight, 0–1.5 mm long overall, without a column. Palea 0.66 length of lemma, hyaline, 2-veined.


**Distribution (TDWG).** Continent. Africa.

**Country/Province/State.** Southern Africa. Kwazulu-Natal, Lesotho, Eastern Cape.


**Illustrations (Journals):** *Darwiniana* (24: 198, Fig. 3 (1982) as *Bromidium hygrometricum*).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect, 5–40 cm long. Ligule an eciliate membrane, 2 mm long. Leaf-blades 2–3 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, 4–7 cm long, 0.5–0.9 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5-veined, more than 3-veined. Lemma surface pubescent. Lemma apex dentate, 4-fid, truncate, awned, 3-awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 5–5.5 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes (outer lobes), 1–1.5 mm long. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 1 (plus 2 rudiments), 0.3–0.4 mm long. Caryopsis with adherent pericarp, 1.3 mm long, dark brown. Hilum linear.

**Distribution (TDWG).** Continent. North America, South America.


**Accepted by:** W.D. Clayton & K. Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms geniculately ascending or decumbent, 15–30 cm long. Ligule an eciliate membrane, 2–4 mm long. Leaf-blades flat or involute, 5–12 cm long, 1–2 mm wide. Leaf-blade surface glabrous. Leaf-blade apex obtuse.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 8–14 cm long, 1.5–5 cm wide. Primary panicle branches spreading, 2-nate, 2–5 cm long. Panicle branches stiff, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 3–10 mm long, smooth.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 2.5–3 mm long, 1.1 length of upper glume, membranous, glandular (on veins), 1-keeled, 3 -veined. Lower glume apex obtuse or acute. Upper glume lanceolate, 2.2–2.8 mm long, 1–1.2 length of adjacent fertile lemma, membranous, glandular (on veins), 1-keeled, 3 -veined. Upper glume apex obtuse or acute.
**Florets.** Fertile lemma elliptic, 2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface asperulous, rough above. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.3–0.4 way up back of lemma, geniculate, 2.5–4.5 mm long overall, with a straight or slightly twisted column. Palea 0.4 length of lemma, hyaline, 0–2 -veined, without keels or 2-keeled. Rachilla extension 0.1 length of fertile floret, pubescent.

**Flower and Fruit.** Lodicles 2, membranous. Anthers 3, 0.6–1 mm long. Caryopsis with adherent pericarp, 1.5 mm long. Hilum linear. Endosperm farinose.

**Distribution (TDWG).** Continent. Africa.


TYPE from Spain. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Spain: Coll?.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. very thin. Culms or inflorescence branches thin.


**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 20–40 cm long, 4–5 -noded. Culm-internodes retrorsely scabrous. Leaf-sheaths smooth or papillose, glabrous on surface. Ligule an eciliate membrane, 1–3 mm long, lacerate, obtuse. Leaf-blades conduplicate, 1–5 cm long, 0.2–2 mm wide. Leaf-blade surface scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, effuse, 4.5–14 cm long, 2.5–8 cm wide. Primary panicle branches spreading, 4–6 -nate, whorled at most nodes. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 1.5–5 mm long, 2.5–7 length of fertile spikelet.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 0.6–0.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2.7–5.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 0.6–0.7 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

**Florets.** Fertile lemma elliptic, 0.4–0.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure, extending close to apex. Lemma apex erose, truncate, muticous. Palea 0.1 mm long, 0.2 length of lemma, hyaline.

**Flower and Fruit.** Lodicles 2, membranous. Anthers 3, 0.3–0.4 mm long. Caryopsis with adherent pericarp, 0.5–0.6 mm long. Hilum linear.

\[ n = 7 \] (2 refs TROPICOS). \[ 2n = 14 \] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, South America.

Region. Northern Europe (*). Southwestern Europe.


Derivation (Clifford & Bostock 2007): in honor of Joy Thompson, a botanist from the National Herbarium, Sydney.


Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or ovate, 6–12 cm long, bearing few spikelets. Panicle branches straight. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, straight, 1–2 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1.5–2.5 mm long, 1 length of upper glume, membranous, light green or purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.5–2.5 mm long, 1.1–1.4 length of adjacent fertile lemma, membranous, light green or purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

Florets. Fertile lemma oblong, 1.3–1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, muticous. Palea absent or minute.

Flower and Fruit. Anthers 3, 0.4–0.5 mm long. Caryopsis with adherent pericarp.


Country /Province /State. Australia. New South Wales, Victoria, Tasmania.

Tablelands.


Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online.

TYPE from Chad. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Chad, Tibesti, Eimi Koussi: Mire.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From Tibesti Mountains, on border of Chad and Libya.


Inflorescence. Inflorescence a panicle. Panicle spiciform, linear. Panicle axis pubescent. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.6–0.8 mm long, pubescent, tip widened.

Fertile Spikelets. Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Florets.** Fertile lemma oblong, 2.5 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure, excurrent. Lemma surface scaberulous, rough above, glabrous. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.75 way up back of lemma, geniculate, 1.5 mm long overall, with a straight or slightly twisted column. Palea 0.8–1.1 mm long, 0.5 length of lemma, hyaline, 2 -veined.

**Flower and Fruit.** Lodicules 2, 0.5–0.6 mm long, membranous. Anthers 3, yellow.

**Distribution (TDWG).** Continent. Africa.
**Country /Province /State.** Northeast Tropical Africa. Chad.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Spain. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: : Based on *A. exasperata* Feliner & Castro ; Spain, Mt. Tileni: Feliner 719 (MA holo).


**Illustrations (Books):** L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (476, Fig. 102 as *A. exasperata*), M.N.Correa, *Flora Patagonica Parte III*, Gramineae (1978) (396, Fig. 265 as *A. exasperata*).

**Derivation** (Clifford & Bostock 2007): from Serra del Telino, Spain.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Basal innovations intravaginal. Culms erect, 6–17 cm long, 2–3 -noded. Leaf-sheaths antrorsely scabrous.  Ligule an eciliate membrane, 3–4 mm long, 2.5–3 mm long on basal shoots, lacerate. Leaf-blades conduplicate, 1.5–12 cm long, 0.4–1.7 mm wide, glaucous. Leaf-blade surface scabrous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 1.5–8 cm long, 0.4–1 cm wide. Primary panicle branches appressed, 2–4 -nate. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension or with a barren rhachilla extension or with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 2.2–2.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.3 mm long.


**Florets.** Fertile lemma ovate, 1.5–2.3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface scabrous, rough below. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 1 mm long overall, with twisted column. Palea oblong, 2 mm long, 0.2 length of lemma, hyaline, 2 -veined. Apical sterile florets 1 in number, barren, lanceolate, 0.5 mm long. Apical sterile lemmas awned, 1 -awned. Apical sterile lemma awns 0.5 mm long.

**Flower and Fruit.** Lodicules 2, lanceolate, 0.3 mm long, membranous. Anthers 3, 1–1.7 mm long. Stigmas 2, laterally exserted. Caryopsis with adherent pericarp, 1.7 mm long, apex unappendaged. Hilum linear. Endosperm farinose.

2n = 1442 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, South America.

**Region.** Southeastern Europe.

**Country /Province /State.** : Greece. Brazil. Brazil South.


**Illustrations (Journals):** *Ruizia* (13:174, Fig 19a-c (1993)).

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Toluca, Mexico.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, slender, 8–32 cm long, 0.5 mm diam., 1–3 -noded. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 2.8–4.5 mm long. Leaf-blades erect, filiform, conduplicate, 5–10 cm long, 0.7–1 mm wide. Leaf-blade surface ribbed, scaberulous.

**Inflorescence.** Inflorescence a panicle. Peduncle 4–8 cm long. Panicle spiciform, linear, 3–10 cm long, 0.3–0.8 cm wide. Primary panicle branches appressed, 0.5–2 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–3 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.3–3.6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume oblong, 2.3–3.6 mm long, 1.1 length of lower glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 2.1–3.2 mm long, 1.1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 2–2.8 mm long, hyaline, without keel. Lemma lateral veins extending close to apex. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 2–2.8 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1 mm long, purple. Caryopsis with adherent pericarp. Hilum linear.

2n = 28 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. *Mesoamerica. Northern South America, Western South America, Southern South America.* Costa Rica, Guatemala, Panama. Bolivia, Colombia, Ecuador, Peru. Argentina Northwest, Chile North.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk trachys, rough; chlaena, cloak. Glumes scabrid.

**Classification.** Subfamily Pooideae. Tribe: Poeae.
**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Stolons present. Culms decumbent, 20–55 cm long. Culm-internodes terete, smooth, distally glabrous. Lateral branches ample. Leaf-sheaths longer than adjacent culm internode, striately veined, smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, 1–3 mm long, lacerate. Leaf-blades 2–7 cm long, 0.5–2 mm wide. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough adaxially. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate or oblong, 1.5–5.5 cm long, 0.6–1.6 cm wide. Primary panicle branches appressed or ascending, 3–5-nate, 0.3–1.5 cm long. Panicle axis glabrous or hispidulous. Panicle branches stiff, flexuous, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, terete, 0.3–2 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear or lanceolate, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret.


**Florets.** Fertile lemma oblong or ovate, dorsally compressed, 1.3–1.8 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent or extending close to apex. Lemma apex erose, obtuse. Palea oblong, 0.6–0.8 mm long, 0.2 length of lemma, hyaline, 2 -veined. Palea surface scabrous. Palea apex obtuse.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Antarctica.

**Country /Province /State.** Subantarctic islands. Tristan de Cunha.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** West-Central Tropical Africa, East Tropical Africa. DRC. Kenya, Tanzania, Uganda.

**Agrostis triaristata** (Hook. f.) Bor, non Knapp(1804). *Grasses Burma, Ceyl., Ind. & Pakist. 391* (1960).


**Recent Synonyms:** *Deyeuxa tripilifera* (Hook. f.) Keng, *Sunyatsenia*, 6: 68 (1941).

**Illustrations (Books):** H.J. Noltie, *The Grasses of Bhutan* (2000) (605, Fig. 26).

**Derivation** (Clifford & Bostock 2007): L. tres, three; arista, bristle; -ata, possessing. Spikelets with lower glume two-awned and upper glume one-awned.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, slender, 12–60 cm long, 2–3 -noded. Culm-nodes brown. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 3–7 mm long, acute. Leaf-blades 4–16 cm long, 2–5 mm wide. Leaf-blade surface smooth or scaberulous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic or pyramidal, 5–16 cm long, 1–8 cm wide. Primary panicle branches spreading. Panicle branches capillary, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–5.5 mm long, 0.8–1 mm wide, breaking up at maturity, disarticulating below each fertile floret. Floret callus 0.33 mm long, pubescent. Floret callus hairs 1 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 4–5.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 4.2–5 mm long, 1.3–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex dentate, 4 -fid, truncate, awned, 3 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 6–7.5 mm long overall, with twisted column. Lateral lemma awns present. Palea 2.2–2.5 mm long, 0.75 length of lemma, hyaline, 2 -awned. Palea keels scaberulous, adorned above. Rhachilla extension 0.4 mm long, pilose.

**Flower and Fruit.** Lodicules 2, 0.7 mm long, membranous. Anthers 3, 0.5–0.7 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.3 mm long. Hilum linear.

n = 14 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Tropical Asia.


**Illustrations (Journals)**: *Ruizia* (13:174, Fig 19d-f (1993)).


**Classification**. Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology**. Perennial, caespitose. Culms 10–20 cm long. Leaves mostly basal. Ligule an eciliate membrane, 2–2.5 mm long. Leaf-blades filiform, involute, 1–3 cm long, 1 mm wide. Leaf-blade surface scaberulous.


**Fertile Spikelets**. Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes**. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1-veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets**. Fertile lemma elliptic, 1.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, muticous. Palea 0.66 length of lemma, hyaline.


**Distribution (TDWG), Continent**. South America.

**Country /Province /State**. Northern South America, Western South America. Venezuela. Colombia, Ecuador, Peru.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations (Books)**: J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (113, Fig. 34).

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Mt Tsaratanana, Madagascar.

**Classification**. Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology**. Perennial, caespitose, clumped loosely. Culms geniculately ascending, 45–100 cm long. Ligule an eciliate membrane, 2.5–4.5 mm long. Leaf-blades 15–20 cm long, 3–5 mm wide.

**Inflorescence**. Inflorescence a panicle. Panicle open, pyramidal, 15–30 cm long, 10–15 cm wide. Primary panicle branches whorled at lower nodes, 5–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

**Fertile Spikelets**. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes**. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3.5–4.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3.5–4.5 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets**. Fertile lemma oblong, 2.5–3 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins excurrent. Lemma surface puberulous. Lemma apex erose, truncate, awned, 1 -awned.
Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, straight, 4–5 mm long overall, without a column. Palea 1 length of lemma, hyaline.


**Distribution (TDWG).** Continent: Africa.
**Country /Province /State.** Western Indian Ocean. Madagascar.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret.


**Florets.** Fertile lemma oblong. 2.5–3 mm long, hyaline, without keel. Lemma surface pubescent. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, straight, 5 mm long overall, without a column. Palea hyaline.

**Distribution (TDWG).** Continent: Africa.
**Country /Province /State.** Western Indian Ocean. Madagascar.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Mt Tsiatondroina, Madagascar.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms 2.5 mm diam., 4 -noded. Culm-internodes ridged, smooth, distally glabrous. Leaf-sheaths striately veined, smooth, glabrous on surface. Ligule an eciliate membrane, 3–4 mm long. Leaf-blades 12–16 cm long, 3–4 mm wide. Leaf-blade surface scaberulous, glabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, pyramidal, 20–25 cm long, 12–13 cm wide. Primary panicle branches spreading, 5–6 -nate, whorled at lower nodes. Panicle axis with lower internodes 5 cm long, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–3 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–4.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 4.5–4.7 mm long, 1 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 4.5–4.7 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1-veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2.5–3 mm long, hyaline, without keel. Lemma lateral veins extending close to apex. Lemma surface pilose. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 4–5 mm long overall, with twisted column. Palea hyaline.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Western Indian Ocean. Madagascar.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Uttar Pradesh, Tungnath: Bhattacharya 1524 (CAL holo, BSD).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): from Tungnath, a mountain in Uttar Pradesh, India.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India.


**TYPE** from Russia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Russia, Mynjilke: Koroykova & Titov 1477 (TAK holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to. From Turkestan region of Kazakhstan.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Indian Subcontinent. India.


**Illustrations (Books):** W. Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (34, Fig. 6).

**Derivation** (Clifford & Bostock 2007): from Mt. Turrialba, a volcano in Costa Rica.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending or decumbent, 10–40 cm long, 0.5–1 mm diam., 1–2-noded, without nodal roots or rooting from lower nodes. Culm-nodes purple. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 1.5–3.5 mm long. Leaf-blades flat, 5–10 cm long, 1–2 mm wide. Leaf-blade surface ribbed, smooth or scaberulous. Leaf-blade margins scabrous.
**Inflorescence.** Inflorescence a panicle. Peduncle 5–10 cm long. Panicle open, elliptic or pyramidal, 4–12 cm long, 2–6 cm wide. Primary panicle branches 3–6, whorled at most nodes. Spikelets ascending, solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume oblong, 2–2.1 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1.8–2 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 1.2–1.4 mm long, hyaline, without keel. Lemma lateral veins extending close to apex. Lemma apex erose, obtuse, muticous. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.7 mm long, purple. Caryopsis with adherent pericarp, ellipsoid. Hilum linear.

**Distribution (TDWG).** Continent. South America.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, lanceolate, 5–13 cm long, 1–3 cm wide. Primary panicle branches ascending. Panicle branches smooth or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2–2.5 mm long, 1.1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.9–2.4 mm long, 1.2 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 1.7–2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, geniculate, with twisted column. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 0.8–1.2 mm long.

**Distribution (TDWG).** Continent. Temperate Asia.
Country /Province /State. Siberia. Tuva.


TYPE from Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Chile, Mirador: Philippi (SGO holo, B).


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–85 cm long. Culm-nodes brown, glabrous. Leaf-sheaths tight, 7–12 cm long, smooth or scaberulous. Ligule an eciliate membrane, 3–5 mm long, obtuse. Leaf-blades 4–17 cm long, 2–6 mm wide. Leaf-blade surface smooth or scabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.1–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.25 length of lemma.


Florets. Fertile lemma elliptic, 2–2.2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough on veins. Lemma apex awned, 1 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, straight, 3.5–4 mm long overall. Palea 0.8–1 mm long, hyaline.

Flower and Fruit. lodicules 2, membranous. Anthers 3, 0.5–0.8 mm long. Caryopsis with adherent pericarp, 1.5–1.6 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South.

Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. Rest of Chile- Biobio, La Araucania, Maule, O'Higgins, Santiago, Valpariso, Chiloe, Aisen, Magellanes. Biobio, La Araucania. Los Lagos, Aisen, Magellanes.


Illustrations: None found.


Habit, Vegetative Morphology. Annual or perennial, short-lived, caespitose. Culms erect, 20–65 cm long, 2–3 -noded. Culm-internodes brown, distally glabrous. Lateral branches lacking. Leaf-sheaths striately veined, glabrous on surface. Ligule an eciliate membrane, 2.5–3 mm long, glabrous on abaxial surface, erose, acute. Leaf-blades 3–8 cm long, 1–2 mm wide. Leaf-blade surface scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.7–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus sparsely hairy, hairy on the margins.


Florets. Fertile lemma elliptic, 1.8–2.2 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn subapical, straight, 1.4–2.5 mm long overall, clearly exerted from spikelet. Palea 0.2–0.4 mm long, 0.1–0.2 length of lemma, 0 -veined.

Flower and Fruit. Lodicules 2, 0.3 mm long, membranous. Anthers 3, 1–1.4 mm long. Caryopsis with adherent pericarp, 1.6–1.7 mm long. Hilum elliptic. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central.

Rest of Chile- Biobio, La Araucania, Maule, O'Higgins, Santado, Valpariso. Valparaiso, Santiago, O'Higgins, Maule, Biobio, La Araucania.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from India. T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database: India, Upper Lasha Chhu valley: EENS 360 (E holo, BSHC).


Derivation (Clifford & Bostock 2007): in honor of Usher Ganguli Lachungpa, of the Forest Department, Sikkim State, India.


Inflorescence. Inflorescence a panicle. Panicle contracted or spiciform, linear, continuous or interrupted, 9–18 cm long. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 1.5–2.5 mm long, 0.5–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3–3.5 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 1.5–2 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.3–0.4 way up back of lemma, geniculate, 3.5 mm long overall, with twisted column. Palea absent or minute.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.5–0.75 mm long. Caryopsis with adherent pericarp. Hilum linear.


Sikkim.


TYPE from Canada. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: : Based on A. varans Trin. ; Canada: Hooker 217 (LE holo).


Derivation (Clifford & Bostock 2007): L. varius, variable; -abilis, indicating capacity.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 8–15 cm long. Lateral branches lacking. Leaves mostly basal. Ligule an eciliate membrane, 0.5–2.5 mm long, lacerate, truncate. Leaf-blades flat or conduplicate, 1–2 mm wide. Leaf-blade surface smooth or scaberulous.

Inflorescence. Inflorescence a panicle. Panicule contracted, linear, 3–6 cm long, 0.5–1 cm wide. Primary panicle branches appressed, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


Florets. Fertile lemma elliptic, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.4–0.5 way up back of lemma, straight, 2–2.5 mm long overall. Palea 0.2–0.4 mm long, 0.1–0.2 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, 0.3–0.5 mm long, membranous. Anthers 3, 0.5 mm long. Caryopsis with adherent pericarp. Hilum linear.


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Florets. Fertile lemma elliptic. 1.75 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, muticous. Palea absent or minute.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.75 mm long. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. South America.


**TYPE** from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Australia, Tasmania: Coll?.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect, 15–40 cm long, 2 -noded. Culm-internodes smooth or scaberulous. Leaf-sheaths antrorsely scabrous. Ligule an eciliate membrane, 2–3 mm long, lacerate, obtuse. Leaf-blades filiform, involute, 2–8 cm long, 0.5 mm wide. Leaf-blade surface scabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus glabrous.


**Florets.** Fertile lemma oblong, 1.5–3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex entire or dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.5 way up back of lemma, straight or geniculate, 3–6 mm long overall, without a column or with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.2–0.3 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Australasia.
Country/Province/State. Australia. New South Wales, A.C.T., South Australia, Tasmania, Victoria, Western Australia.
Tablelands, Western Slopes.


TYPE from Chile. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Chile, Rio Puelo: Vidal (SGO holo, BAA, K).


Derivation (Clifford & Bostock 2007): in honor of Francesco Vidal Gormaz, Chilean Army Officer.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, hairy in 2 tufts.


Florets. Fertile lemma elliptic, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough on veins. Lemma apex awned, 1 -awned. Principal lemma awn dorsal, arising 0.75 way up back of lemma, 0.5 mm long overall. Palea 1.1–1.5 mm long, hyaline.

Flower and Fruit. Lodicles 2, 0.6–0.8 mm long, membranous. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp, 1.2–1.6 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile South.

Chubut, Neuquén, Río Negro. Rest of Chile- Biobio, La Aucarania, Maule, O’Higgins, Santa, Valpariso. Los Lagos, Aisen.


TYPE from Germany. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Germany, Leipzig: Schreber (LE iso).


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect or geniculately ascending, 10–60 cm long. Ligule an eciliate membrane, 1–5 mm long, obtuse or acute. Leaf-
blades flat or convolute, 2–15 cm long, 1–3 mm wide. Leaf-blade surface scabrous, rough adaxially or on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, lanceolate or oblong or ovate, 2–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–3.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma oblong, 1.5–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, muticus or awned, 1 -awned. Principal lemma awn dorsal, arising 0.4 way up back of lemma, geniculate, 2–4.5 mm long overall, with twisted column. Palea 0.5 mm long, hyaline, 2 -veined.


**Distribution (TDWG).** Continent. Europe, Temperate Asia, Tropical Asia, North America, South America.

**Region.** Northern Europe. Middle Europe. Southwestern Europe, Southeastern Europe, Eastern Europe.


Darjeeling, Chubut. Coquimbo.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 40–80 cm long, 2–3 -noded. Leaves basal and cauline. Ligule an ecellate membrane, 4–6 mm long. Leaf-blades 9–22 cm long, 2–4 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 17–20 cm long, 1 cm wide. Primary panicle branches ascending, rebranched below middle. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.9–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous or sparsely hairy.
**Glumes.** Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume oblong, 2.9–3.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume oblong, 2.9–3.5 mm long, 1.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma ovate, 1.6–2 mm long, hyaline, without keel. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, geniculate, 1.5–3 mm long overall, clearly exserted from spikelet, with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.6–0.7 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. North America, South America.


**TYPE** from Tanzania. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Tanzania, Kilimanjaro: *Volkens 1856* (K holo).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 6–45 cm long. Ligule an eciliate membrane. Leaf-blades filiform, involute, 5–10 cm long, 1 mm wide, stiff. Leaf-blade venation without layer of subepidermal sclerenchyma masking vein striation or with continuous uniform subepidermal sclerenchyma layer on the underside. Leaf-blade surface scabrous, rough abaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.


**Florets.** Fertile lemma ovate, 2–3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma surface glabrous or pilose. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 3–5 mm long overall, with twisted column. Palea 1 length of lemma, hyaline, 2 -veined. Palea apex with excurrent keel veins. Rhachilla extension 0.05–0.1 length of fertile floret.


**Distribution (TDWG).** Continent. Africa.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Manipur, Sirhoi Kashong: *Kingdon-Ward 18145* (K holo).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate, 7–14 cm long, 1–2.5 cm wide. Primary panicle branches whorled at most nodes, 3–6 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 1.6–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, with lower wider than upper, exceeding apex of florets, firmer than fertile lemma, parallel to lemmas or gaping. Lower glume lanceolate, 1.6–2 mm long, 1–1.1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scaberulous. Lower glume surface asperulous. Lower glume apex obtuse or acute. Upper glume lanceolate, 1.6–2 mm long, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume surface asperulous. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 1.2–1.4 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 5 -fid, truncate. Palea oblong, 1 mm long, 0.6–0.8 length of lemma, hyaline, 2 - veined. Palea apex obtuse.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Antarctica.

**Country/Province/State.** Subantarctic islands. Tristan de Cunha.
Upper glume ovate, 2.7–3.1 mm long, 1.3 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma margins ciliate. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 6 mm long overall, with twisted column. Column of lemma awn 2 mm long. Palea 2 mm long, 0.8–1 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. Assam. Manipur.


**Illustrations (Journals):** *Novon* (19:37, Fig 2 (2009)).

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Butt sheaths persistent and investing base of culm, with soft dead sheaths. Culms erect or geniculately ascending, 11–29 cm long, 3–10 -noded, without nodal roots or rooting from lower nodes. Culm-internodes smooth. Leaf-sheaths open for most of their length. Ligule an eciliate membrane, 1–3.1 mm long, erose. Leaf-blades flat or involute, 1.5–5 cm long, 0.3–0.5 mm wide. Leaf-blade surface smooth, glabrous.

**Inflorescence.** Inflorescence a panicle, comprising 5–20(–30) fertile spikelets. Panicle open, oblong, 2–4 cm long. Primary panicle branches spreading, bearing 1–3 fertile spikelets on each lower branch. Panicle axis 2–4 noded. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.7–4 mm long, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–10 mm long, with hairs extending (3.5–)4–4.5 mm beyond apex, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, reaching apex of florets. Lower glume lanceolate, (2.8–)3.4–4.4 mm long, 0.8–1 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined or 3 -veined. Lower glume primary vein scaberulous (above). Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume lanceolate, (3.2–)4–4.4 mm long, 1 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 1 -veined or 3 -veined. Upper glume primary vein scaberulous (above). Upper glume lateral veins absent or distinct. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 4–4.5 mm long, membranous, much thinner above, keeled, 5 -veined, more than 3-veined. Lemma midvein scaberulous (above). Lemma lateral veins obscure. Lemma surface papillose. Lemma apex entire or dentate, 3 -fid, with lobes 0.2 mm long, acute, awned, 1 -awned. Principal lemma awn apical or from a sinus, straight or curved or flexuous, 2–5.2 mm long overall. Palea 1 length of lemma. Palea keels 0.25 mm apart, scabrous, adorned above.

**Flower and Fruit.** Lodicules 2, lanceolate, 0.5 mm long, veinless, acute. Anthers 3, 2.1–2.7 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia.


**Illustrations (Journals):** *Novon* (19:35, Fig 1 (2009)).
**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect, slender, 7–15 cm long, 6–8 -noded. Culm-internodes smooth, distally glabrous. Lateral branches ample, arising from lower culm. Leaves mostly basal. Leaf-sheaths loose, open for most of their length, smooth. Ligule an eciliate membrane, 0.8–3.5 mm long, entire or erose, acute. Leaf-blades flat or involute, 0.8–2.5 cm long, 0.3 mm wide. Leaf-blade surface smooth, glabrous.

**Inflorescence.** Inflorescence a panicle, comprising 5–15 fertile spikelets, embraced at base by subtending leaf. Panicle open, oblong, 1–3.5 cm long, bearing few spikelets. Primary panicle branches 1–4 -nate, 1–1.5 cm long. Panicle axis 3–5 noded. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.4–3 mm long, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper fertile. Spikelets oblong, laterally compressed, 3–10 mm long, with hairs extending 2.4–3.9 mm beyond apex, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 2.3–2.6 mm long, 0.66–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 2.4–3.9 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma ovate, 2.1–3 mm long, membranous, much thinner above, keeled, 5 -veined, more than 3-veined. Lemma midvein scaberulous (above). Lemma lateral veins obscure. Lemma apex acute, awned, 1 -awned. Principal lemma awn apical, 2.5–5.2 mm long overall, without a column (but loosely twisted). Palea 1 length of lemma. Palea keels 0.2 mm apart, smooth.

**Flower and Fruit.** Lodicules 2, 0.3 mm long. Anthers 3, 1.6–2.1 mm long. Caryopsis with adherent pericarp, 1.5 mm long, dark brown.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia.


**Illustrations (Journals):** *Novon* (19:39, Fig 3 (2009)).

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect or geniculately ascending, 15–20 cm long, 2–3 -noded, without nodal roots or rooting from lower nodes. Leaves basal and cauline. Leaf-sheaths open for most of their length, with 0.25 of their length closed, 4 cm long. Ligule an eciliate membrane, 0.5–2.5 mm long, lacerate. Leaf-blades flat or conduplicate or involute, 1.5–4.5 cm long, 0.5–0.8 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex abruptly acute, hooded.

**Inflorescence.** Inflorescence a panicle, comprising 8–11 fertile spikelets. Panicle open, oblong, 2–3 cm long, bearing few spikelets. Primary panicle branches spreading, 1–3 -nate, 0.4–0.6(–1) cm long, bearing 1 fertile spikelets on each lower branch. Panicle axis 3–5 noded. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–10 mm long, with hairs extending 4.5–5.6 mm beyond apex, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 4.4–5.6 mm long, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined or 3 -veined. Lower glume primary vein scaberulous (above). Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume lanceolate, 4.7–5.6 mm long, 1.3 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 1 -veined or 3 -veined. Upper glume primary vein scaberulous (above). Upper glume lateral veins absent or distinct. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 3.7–4.5 mm long, membranous, much thinner above, keeled, 5 -veined, more than 3-veined. Lemma midvein scaberulous (above). Lemma lateral veins obscure. Lemma surface


**Derivation** (Clifford & Bostock 2007): foliage resembling that of *Dianthus caryophyllus*.

**Classification.** Subfamily Pooidae. Tribe: Poeeae.

**Habit. Vegetative Morphology.** Annual. Culms erect, 3–40(–55) cm long, 2–3 -node. Leaves mostly basal. Ligule an eciliate membrane, 2–5 mm long, erose, obtuse. Leaf-blades filiform, involute, 0.5–5 cm long, 0.3–1 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 1–12 cm long, (2–)3.5–10(–14) cm wide. Panicle branches capillary, terete, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 1–10 mm long, tip pyriform.

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong to ovate, laterally compressed, 2.4–3.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachillia internodes suppressed between florets (florets arising at about the same level). Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 2.4–3.1 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume apex acute. Upper glume ovate, 2.4–3.1 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1–3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.


**TYPE** from Sicily. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Italy: Sicily..


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 10–35 cm long, 2–3-noded. Leaves mostly basal. Ligule an eciliate membrane, 1–5 mm long. Leaf-blades 1–6 cm long, 0.5–1 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 2–12 cm long. Primary panicle branches ascending or spreading. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, tip globular.

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong to ovate, laterally compressed, 1.3–2.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes suppressed between florets (florets arising at about the same level), Floret callus pubescent.

**Glumes.** Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 1.3–2.3 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume apex obtuse. Upper glume ovate, 1.3–2.3 mm long, 1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1–3 -veined. Upper glume primary vein scaberulous. Upper glume apex obtuse.

**Florets.** Fertile florets all alike or with the lowest dissimilar. Lowest fertile lemma muticous. Fertile lemma ovate, laterally compressed, lanceolate in profile, 1.3–2 mm long, cartilaginous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous, rough above. Lemma margins involute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 1.8–2.5 mm long overall, with twisted column. Palea elliptic, 0.7 length of lemma, cartilaginous, 2 -veined. Palea apex obtuse.

**Flower and Fruit.** Lodicules 2, lanceolate, membranous. Anthers 3, 0.1–0.25 mm long. Stigmas 2, protandrous, laterally exserted. Caryopsis with adherent pericarp, fusiform, isodiametric, biconvex, estipitate, without sulcus, 1 mm long, smooth, apex unappendaged. Embryo 0.2 length of caryopsis. Hilum punctiform. Endosperm farinose.

\[ n = 7 \text{ (4 refsTROPICOS).} \]
\[ 2n = 14 \text{ (1 ref TROPICOS).} \]

**Distribution (TDWG).** Continent. Europe, Africa, Australasia (*).

**Region.** Northern Europe, Southwestern Europe, Southeastern Europe (*).


South-West. North, South East. Coast, Tablelands, Western Slopes, Western Plains.


**Images:** D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);
Derivation (Clifford & Bostock 2007): L. *elegans*, elegant; -*issima*, most. Very attractive in some respect, usually the inflorescence.


Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, slender, 10–40 cm long. Ligule an eciliate membrane, 2–3 mm long, acute. Leaf-blades filiform, flat or convolute, 2–4 cm wide. Leaf-blade surface scaberulous, glabrous. Leaf-blade apex obtuse.


Fertile Spikelets. Spikelets comprising 2 fertile florets, without rachilla extension. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 1.5–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes suppressed between florets (florets arising at about the same level). Floret callus pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 1.5–2.5 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1.5–2.5 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile florets all alike or with the lowest dissimilar. Lowest fertile lemma muticous or awned. Fertile lemma ovate, laterally compressed, lanceolate in profile, 1.5 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scabrous. Lemma margins involute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.3–0.4 way up back of lemma, geniculate, 1.5–2 mm long overall, clearly exserted from spikelet, with twisted column.

Flower and Fruit. Lodicules 2, lanceolate, membranous. Anthers 3, 0.3–0.5 mm long. Stigmas 2.

2n = 5 (5 refs TROPICOS).


Region. Northern Europe, Middle Europe, Southeastern Europe (*), Southwestern Europe, Eastern Europe.

Country /Province /State. : Great Britain (*). : Austria, Czechoslovakia, Germany, Hungary, Switzerland. : Baleares, Corsica, France, Sardinia, Spain. : Albania, Bulgaria, Greece, Italy, Crete, Romania, Sicily, Turkey Europe, Yugoslavia, Krym. Northern Africa, Macaronesia, Western Indian Ocean. Algeria, Morocco. Canary Is. Mauritius (*), Madagascar (*). Middle Asia, Caucasus, Western Asia. Turkmenistan. Iran. Australia (*), New Zealand (*). New South Wales (*), A.C.T. (*), South Australia (*), Tasmania (*), Victoria (*), Western Australia (*). New Zealand North I, New Zealand South I. North West USA, Southwestern USA, South-central USA, Southeastern USA. Oregon, California. Texas, Alabama, Arkansas, Georgia, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Virginia. Western South America, Brazil, Southern South America. Chile Central, Uruguay.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology**. Annual. Culms erect, 2–25 cm long, 2–3 -noded. Leaves mostly basal. Ligule an eciliate membrane, 1.5–3.5 mm long, entire, obtuse. Leaf-blades filiform, involute, 0.5–5 cm long, 0.3–0.5 mm wide. Leaf-blade surface smooth or scaberulous. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear or oblong, 0.5–4.5 cm long, 0.2–0.8 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear, terete, 1–3 mm long.

**Fertile Spikelets.** Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong to ovate, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets (florets arising at about the same level). Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 3–3.5 mm long, 1 length of upper glume, membranous, much thinner above, much thinner on margins, 1-keeled, keeled above, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume apex acute. Upper glume ovate, 3–3.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1–3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

**Florets.** Fertile lemma ovate, laterally compressed, lanceolate in profile, 2.7–3.1 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous, rough above. Lemma margins involute, covering most of palea. Lemma apex dentate, 3 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.3–0.4 way up back of lemma, geniculate, 3.4–4.3 mm long overall, with twisted column. Palea elliptic, 0.7 length of lemma, cartilaginous, 2 -veined. Palea apex obtuse.

**Flower and Fruit.** Lodicules 2, lanceolate, membranous. Anthers 3, 0.25–0.3 mm long. Stigmas 2, protandrous, laterally exserted. Caryopsis with adherent pericarp, fusiform, isodiametric, biconvex, estipitate, without sulcus, smooth, apex unappendaged. Embryo 0.2 length of caryopsis. Hilum punctiform. Endosperm farinose.

n = 7 (1 ref TROPICOS), 2n = 14 (2 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Australasia (*), North America, South America, Antarctica.

**Region.** Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.

**Country/Province/State.** : Denmark, Finland, Foroyar, Great Britain, Ireland, Norway, Sweden. : Belgium, Czechoslovakia, Germany, Netherlands, Poland, Switzerland. : France, Portugal, Spain. : Italy. Estonia, Latvia, Lithuania, Baltic States, Krym. **Macaronesia.** Azores, Canary Is, Madeira. Western Cape. **Caucasus.** **Western Asia.** North Caucasus. Turkey. **Australia (*).** New Zealand (*). New South Wales (*), Tasmania (*), Victoria (*), Western Australia (*). Chatham Is, New Zealand North I, New Zealand South I, Stewart Is. Western Canada. **Eastern Canada.** **Northwest USA.** **North-central USA.** **Northeast USA.** **Southwestern USA.** **Southeastern USA.** British Columbia. Nova Scotia. Oregon. Washington. New Jersey. California. Delaware, Maryland, Virginia. **Southern South America.** Argentina South, Chile South, Juan Fernandez Is, Uruguay. **Subantarctic islands.** Falkland Is (Malvinas).

South-West. Coast. Santa Cruz, Tierra del Fuego. Los Lagos, Magellanes.


**TYPE** from France. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: S. France.


Derivation (Clifford & Bostock 2007): L. *provincia*, province; -alis, pertaining to. Relating to a province, in particular to Provincia, now Provence, France.


Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, slender, 10–40 cm long. Ligule an eciliate membrane, 2–3 mm long, acute. Leaf-blades filiform, flat or convolute, 2–4 cm long, 0.5–1 mm wide. Leaf-blade surface scaberulous, glabrous. Leaf-blade apex obtuse.


Fertile Spikelets. Spikelets comprising 2 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes suppressed between florets (florets arising at about the same level). Floret callus pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 3.5 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute.

Upper glume ovate, 3.5 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile florets with the lowest dissimilar. Lowest fertile lemma muticous or awned (shorter than upper). Fertile lemma ovate, laterally compressed, lanceolate in profile, 2.5 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scabrous. Lemma margins involute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 2.5 mm long overall, clearly exserted from spikelet (upper) or not or scarcely exserted from spikelet (lower), with twisted column.


n = 14 (1 ref TROPICOS). 2n = 28 (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe, Australasia (*).

Region. Northern Europe (*), Southwestern Europe.

Country /Province /State. : GB Aliens (Ryves et al). : Corsica, France. Australia (*). New South Wales (*).

Tablelands.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *scopae*, broom; -aria, pertaining to. Inflorescences condensed resembling a broom.


Habit, Vegetative Morphology. Annual. Culms erect, 3–40 cm long. Leaves mostly basal. Ligule an eciliate membrane. Leaf-blades filiform, involute, 0.5–5 cm long, 0.3–1 mm wide. Leaf-blade apex acute.


Fertile Spikelets. Spikelets comprising 2 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong to ovate, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below
each fertile floret. Rhachilla internodes suppressed between florets (florets arising at about the same level). Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 2 mm long. 1 length of upper glume, membranous, 1-keeled, keeled above, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex obtuse, mucronate. Upper glume ovate, 2 mm long. 1.2 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume apex obtuse, mucronate.

**Florets.** Fertile florets all alike or with the lowest dissimilar. Lowest fertile lemma muticous or awned. Fertile lemma ovate, laterally compressed, 1.5 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous, rough above. Lemma margins involute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.3–0.4 way up back of lemma, geniculate, 2–3 mm long overall, with twisted column. Palea cartilaginous, 2 -veined.


**TYPE** from Sicily. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Sicily: Coll?.

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Michele Tenore (1780–1861) Italian botanist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, slender, 10–40 cm long, 2–3 -noded. Leaves mostly basal. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 2–3 mm long, acute. Leaf-blades flat or involute, 2–4 cm long, 0.4–0.8 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate or globose, effuse, 4–9 cm long, 2–5 cm wide. Primary panicule branches branching diversaricatorily. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 5–8 length of fertile spikelet.

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong to ovate, laterally compressed, 1.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets (florets arising at about the same level). Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 1.5–3 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume apex entire or erose, obtuse, muticous or mucronate. Upper glume ovate, 1.5–3 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1–3 -veined. Upper glume primary vein scaberulous. Upper glume apex obtuse, muticous or mucronate.

**Florets.** Fertile lemma ovate, laterally compressed, lanceolate in profile, 1.2–2.5 mm long, cartilaginous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous, rough above. Lemma margins involute, covering most of palea. Lemma apex dentate, 2 -fid, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 2–3 mm long overall, with twisted column. Palea elliptic, 0.7 length of lemma, cartilaginous, 2 -veined. Palea apex obtuse.

**Flower and Fruit.** Lodicules 2, lanceolate, membranous. Anthers 3, 0.7–1.7 mm long. Stigmas 2, protandrous, laterally exserted. Caryopsis with adherent pericarp, fusiform, isodiametric, biconvex, estipitate, without sulcus, 1 mm long, smooth, apex unappendaged. Embryo 0.2 length of caryopsis. Hilum punctiform. Endosperm farinose.

\[ n = 7 \ (1 \text{ ref TROPICOS}) \]

\[ 2n = 14 \ (1 \text{ ref TROPICOS}) \]


**TYPE** from Morocco. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Morocco, Mogador: Coll?.

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *inus*, one; *arista*, bristle; -ata, possessing. Lemma one-awned.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 3–40 cm long. Leaves mostly basal. Ligule an eciliate membrane, entire. Leaf-blades filiform, involute, 0.5–5 cm long, 0.3–1 mm wide. Leaf-blade apex acute.


**Fertile Spikelets.** Spikelets comprising 2 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong to ovate, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes suppressed between florets (florets arising at about the same level). Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 2–2.5 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 1–3 -veined. Lower glume apex acute. Upper glume ovate, 2–2.5 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume apex acute.

**Florets.** Fertile florets all alike or with the lowest dissimilar. Lowest fertile lemma muticous or awned. Fertile lemma ovate, laterally compressed, 1.5–2 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous, rough above. Lemma margins involute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.3–0.4 way up back of lemma, geniculate, 2–3 mm long overall, with twisted column. Palea cartilaginous, 2 -veined.


$$n = 7$$ (1 ref TROPICOS), $$2n = 14$$ (1 ref TROPICOS).

**Distribution (TDWG).** Continent: Europe.

**Region.** Southwestern Europe.

**Country /Province /State.** : Portugal, Spain.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. slender. Culms or inflorescence branches slender.

**Classification.** Subfamily Pooideae. Tribe: Poeae.
Habit, Vegetative Morphology. Annual, caespitose. Culms 3–20(–30) cm long. Ligule an eciliate membrane, 1–2 mm long, lacerate, obtuse. Leaf-blades convolute, 1–6 cm long, 0.5–1.5 mm wide. Leaf-blade surface scabrous.


Fertile Spikelets. Spikelets comprising 2 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets orbicular, laterally compressed, 1.2–1.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume orbicular, gibbous, 1.2–1.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume orbicular, gibbous, 1.2–1.5 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Fertile lemma orbicular, gibbous, 1–1.3 mm long, membranous, shiny, without keel, 3 -veined, 0–3 -veined. Lemma margins pilose. Lemma apex obtuse.

Flower and Fruit. Anthers 3, 0.3 mm long. Ovary glabrous. Caryopsis with adherent pericarp, orbicular, dorsally compressed, plano-convex, 0.5 mm long. Endosperm farinose.

n = 4 (1 ref TROPICOS).

Region. Southwestern Europe, Southeastern Europe.


Illustrations (Journals): Austrobaileya 3(4): 671, Fig.1 (1992).

Derivation (Clifford & Bostock 2007): L. repo, crawl. Rhizome well developed.


Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 18–24 cm long, 3–4 -noded. Lateral branches sparse. Leaf-sheaths longer than adjacent culm internode. Ligule a fringe of hairs. Leaf-blades 0.5–6 cm long, 1–1.5 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous. Leaf-blade margins smooth.

Inflorescence. Inflorescence a panicle, comprising 3–6 fertile spikelets. Panicle contracted, linear, 1.5 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, terete, 4–7 mm long, smooth.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 3–3.5 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes thinner than fertile lemma. Lower glume ovate, 2 mm long, 0.66 length of spikelet, chartaceous, 5–7 -veined. Lower glume apex acute. Upper glume elliptic, 3 mm long, 1 length of spikelet, chartaceous, without keels, 9 -veined. Upper glume lateral veins ribbed. Upper glume surface glabrous or pilose (sparsely in middle), with tubercle-based hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, 3 mm long, 1 length of spikelet, chartaceous, 9 -veined, ribbed, acute. Fertile lemma oblong, dorsally compressed, 1.5 mm long, cartilaginous, yellow, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure.
Lemma surface striate. Lemma margins flat. Lemma apex acute. Palea gaping, oblong, 1.5 mm long, cartilaginous.

**Flower and Fruit.** Lodicles 2, 0.5 mm long. Anthers 3, 2.5 mm long or 0.8 mm long (upper). Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Australasia.
**Country/Province/State.** Australia. New South Wales. Coast.


IT: *Pungo & Cabondo* 7417, Africa: on the higher rocks of the praesidium at Pedra Cazella.

**Illustrations (Journals):** *Hooker's Icones Plantarum* (t.3418 (1940)).

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Pungo Andongo District, Angola.

**Classification.** Subfamily Arundinoideae. Tribe: Arundineae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped moderately. Butt sheaths coriaceous, glossy, woolly, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 30–60 cm long. Ligule a fringe of hairs, 0.8 mm long. Leaf-blades involute, 12–23 cm long, 3–6 mm wide. Leaf-blade apex pungent.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 5–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 10–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1 mm long. Floret callus obtuse.

**Glumes.** Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblong or ovate, 5–6.5 mm long. 1 length of upper glume, herbaceous, 1-keeled, 3 -veined. Lower glume apex acuminate, awned, 1 -awned, awn 0.5 mm long. Upper glume oblong or ovate, 5–6.5 mm long, 0.75 length of adjacent fertile lemma, herbaceous, 1-keeled, 3 -veined. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 0.5 mm long.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate or ovate, 6 mm long, herbaceous, 5 -veined, dentate, 2 -fid, awned. Awn of lower sterile floret straight, 1 mm long. Fertile lemma elliptic, 6–7 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins absent or obscure below. Lemma surface with marginal hair tufts, bearing 2 hair tufts in all. Lemma apex lobed, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7–9 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, shorter than principal. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicles 2, glabrous. Anthers 3, 3 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country/Province/State.** South Tropical Africa. Angola.


**TYPE** from Malawi. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Mulanje: *Phipps* 2769 (K holo, BM, SRGH).

**Illustrations:** None found.

Classification. Subfamily Arundinoideae. Tribe: Arundineae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped moderately. Butt sheaths papery, woolly, persistent and investing base of culm, with fibrous dead sheaths. Culms 30–60 cm long. Ligule a fringe of hairs, 0.5–0.6 mm long. Leaf-blades convolute, 8–17 cm long, 2–3.5 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 5–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 11–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 6–8 mm long, 1 length of upper glume, herbaceous, 1-keeled, 3 -veined. Lower glume apex acuminate, awned, 1 -awned, awn 0.5 mm long. Upper glume elliptic, 6–8 mm long, 1 length of adjacent fertile lemma, herbaceous, 1-keeled, 3–5 -veined. Upper glume apex dentate, 3 -fid, awned, 1 -awned, aqw 0.5 mm long.

Florets. Basal sterile florets 1, male or barren (sometimes bisexual), with palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate or ovate, 7–7.5 mm long, herbaceous, 5 -veined, eciliate on margins or ciliate on margins, dentate, 2 -fid, awned. Awn of lower sterile floret geniculate, 5–10 mm long. Palea of lower sterile floret 0.8 length of lemma, pubescent, adorned on keels. Fertile lemma elliptic, 6 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface with marginal hair tufts, bearded 2 hair tufts in all. Lemma hairs 1–1.3 mm long. Lemma apex lobed, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, with twisted column. Lateral lemma awns present, arising on apex of lobes, shorter than principal. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, glabrous. Anthers 3.


Country/Province/State. South Tropical Africa. Malawi.


Illustrations: None found.


Classification. Subfamily Arundinoideae. Tribe: Arundineae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped moderately. Butt sheaths thickened and forming a bulb, woolly, persistent and investing base of culm, with compacted dead sheaths. Culms 30–66 cm long. Leaf-sheath oral hairs ciliate, 2.5 mm long. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades convolute, 15–30 cm long, 4–6 mm wide. Leaf-blade surface scaberulous, rough adaxially.


Fertile Spikelets. Spikelets comprising 5–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear or lanceolate, laterally compressed, 8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate or ovate, 4–6.3 mm long, 0.7–0.9 length of upper glume, herbaceous, 1-keeled, 1–3 -veined. Lower glume surface puberulous. Lower glume apex acuminate, muticous or awned, 1 -awned, awn 0.5 mm long. Upper glume lanceolate or ovate, 3.7–7 mm long, 0.8–0.9 length of adjacent fertile lemma,
herbaceous, 1-keeled, 3–5 -veined. Upper glume surface puberulous. Upper glume apex acuminate, muticous or awned, 1 -awned, awn 0.5 mm long.

**Florets.** Fertile florets with the lowest dissimilar (hair tufts weaker). Fertile lemma elliptic, 7–8 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface with marginal hair tufts, bearing 2 hair tufts in all. Lemma apex lobed, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 5–10 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, shorter than principal. Palea 0.8 length of lemma. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, glabrous. Anthers 3, 1.8 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** South Tropical Africa. Malawi.


**TYPE** from Malawi. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Namuli Peaks: Torre 5146 (K holo).

**Illustrations:** None found.


**Classification.** Subfamily Arundinoideae. Tribe: Arundineae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped moderately. Butt sheaths thickened and forming a bulb, glossy, woolly, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 40–80 cm long. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades flat or involute, 17–45 cm long, 3–6 mm wide. Leaf-blade apex pungent.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 3–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–7(–12) mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5 mm long. Floret callus obtuse.

**Glumes.** Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate or ovate, 3–5 mm long, 1 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume surface glabrous or puberulous. Lower glume apex acuminate, muticous. Upper glume lanceolate or ovate, 3–5 mm long, 0.75–0.8 length of adjacent fertile lemma, chartaceous, 1-keeled, 3–5 -veined. Upper glume surface glabrous or puberulous. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 0.5–1 mm long.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate or ovate, 4 mm long, herbaceous, 5 -veined, puberulous, hairy above, dentate, 2 -fid, awned. Awn of lower sterile floret straight or flexuous (reflexed), 1 mm long. Fertile lemma elliptic, 4–6 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous or puberulous, hairy above, with marginal hair tufts, bearing 2 hair tufts in all. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, shorter than principal. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, glabrous. Anthers 3, 2–3.3 mm long. Caryopsis 2.3 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** South Tropical Africa. Mozambique.


Illustrations (Books): G.V.Pope et al., Flora Zambesiaca 10 (2(1999):10, T. 5), T.R.Soderstrom, K.W.Hilu, C.S.Campbell & M.E.Barkworth (246, Fig. 22.6).

Derivation (Clifford & Bostock 2007): Gk. oros, mountain; genea, birthplace. Mountain born, that is growing on mountains.

Classification. Subfamily Arundinoideae. Tribe: Arundineae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short (up to 12 mm diam). Butt sheaths papery, woolly, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 100–200 cm long. Ligule a fringe of hairs, 0.5–0.9 mm long. Leaf-blades 60–130 cm long, 10–20 mm wide. Leaf-blade apex hooded.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, (3–)6–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 20–26 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes 1.5 mm long. Floret callus elongated, 1.6–2 mm long, bearded, obtuse. Floret callus hairs 0.3 length of lemma.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 7–10 mm long. 0.75 length of upper glume, membranous, 1-keeled, (3–)5 -veined. Lower glume surface pilose, hairy above. Lower glume apex acuminate. Upper glume elliptic, 9–14 mm long, 0.9–1.4 length of adjacent fertile lemma, membranous, 1-keeled, 5 -veined. Upper glume surface pilose, hairy above. Upper glume apex dentate, 2 -fid, awned, 1 -awned.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, elliptic, (11–)15–15 mm long, membranous, 5 -veined, pilose, hairy above, dentate, 2 -fid, awned. Awn of lower sterile floret straight, 1 mm long. Fertile lemma elliptic, 10 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy above, with marginal hair tufts, bearing 2 hair tufts in all. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 13–15 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2–4 mm long, shorter than principal. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, glabrous. Anthers 3, 5–6 mm long.


Country /Province /State. South Tropical Africa. Malawi.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From the Uluguru Mountains, Tanzania.

Classification. Subfamily Arundinoideae. Tribe: Arundineae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short (1–2mm diam). Butt sheaths indurate, glossy, woolly, persistent and investing base of culm, with compacted dead sheaths. Culms robust, 50–100 cm long. Ligule a fringe of hairs, 0.8 mm long. Leaf-blades deciduous at the ligule, linear or lanceolate, flat or convolute, 35–70 cm long, 4–8 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex acute, hooded.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate or oblong, 12–14 cm long, 5–6 cm wide. Primary panicle branches ascending. Panicle branches angular, smooth or scaberulous. Spikelets solitary, Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear or lanceolate, laterally compressed, 8–9 mm long.
breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse. Floret callus hairs 1.5 mm long.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 3–3.5 mm long, 0.8–0.9 length of upper glume, herbaceous, 1-keeled, 3–5 -veined. Lower glume surface puberulous. Lower glume apex obtuse or acute, awned, 1 -awned, awn 0.5 mm long. Upper glume elliptic, 3.5–4 mm long, 0.75 length of adjacent fertile lemma, herbaceous, 1-keeled, 3–5 -veined. Upper glume surface puberulous. Upper glume apex obtuse or acute, awned, 1 -awned, awn 0.5 mm long.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate or ovate, 4.5 mm long, herbaceous, 5 -veined, dentate, 2 -fid, awned. Awn of lower sterile floret straight, 1 mm long. Palea of lower sterile floret 0.66 length of lemma, pubescent, adorned on keels. Fertile lemma elliptic, 4.5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous or puberulous, hairy above, without hair tufts. Lemma apex lobed, 2 -fid, awned, 3 -awned. Principal lemma aawn from a sinus, curved, reflexed, 6 mm long overall, without a column. Lateral lemma awns present, arising on apex of lobes, shorter than principal. Palea 0.75–0.8 length of lemma. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, glabrous. Anthers 3, 0.8–1 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** East Tropical Africa. Tanzania.


**Derivation** (Clifford & Bostock 2007): L. -*ana*, indicating location. From Texas, USA.

**Classification.** Subfamily Chloridoideae. Tribe: Eragrostideae.

**Habit, Vegetative Morphology.** Perennial. Stolons present. Culms geniculately ascending, 25–65 cm long. Ligule a ciliate membrane, 0.5–1.4 mm long. Leaf-blades flat or conduplicate, 15–30 cm long, 2.5–6 mm wide. Leaf-blade margins scabrous. Dioecious.

**Inflorescence.** Inflorescence composed of racemes. Racemes 5–9, borne along a central axis, ascending or appressed, paucilateral, 1–6 cm long. Central inflorescence axis 5–20 cm long. Rhachis angular. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 8–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 10–20 mm long, 2.5–3.5 mm wide. Leaf-blade margins scabrous. Dioecious.

**Flower and Fruit.** Lodicules 2, glabrous. Anthers 3, 0.8–1 mm long.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. narrow. Narrow, with respect to leaf- blades or spicate panicles.


Habit, Vegetative Morphology. Perennial. Butt sheaths herbaceous, glabrous or pubescent. Culms decumbent, slender, 50–100 cm long, wiry. Ligule a fringe of hairs. Leaf-blades convolute, 5–15 cm long, 1–2 mm wide.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension or with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.5–4 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, fenestrate (at base), 5 -veined, acuminate. Fertile lemma oblong, 2–3.5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 0.5–1 mm long overall. Palea chartaceous. Palea surface smooth, pubescent.


Illustrations (Books): R.M.Polhill, F.T.E.A., Gramineae (3(1982):618, Fig. 144), G.V.Pope et al., Flora Zambesiaca 10, J.Bosser, Graminees des Paturage et des Cultures a Madagascar (1969) (351, Fig 132), S.Phillips, Poaceae (Gramineae) in I.Hedberg & S.Edwards, Flora of Ethiopia and Eritrea (1995) (217, Fig. 89), T.A.Cope, in M.Thulin, Poaceae (Gramineae). Flora of Somalia (1995) (225, Fig. 128), K.M.Mathew, Illustrations on the Flora of Tamilnadu Carnatic (1982) (Pl. 801), T.A.Cope, Flora of Pakistan 143: Poaceae (1982) (215, Fig. 24), H.B.Gilliland, Grasses of Malaya (1971) (201, Fig. 42), H.Duistermaat, Field Guide to the Grasses of Singapore (2005) (33, Fig. 20), M.E.Barkworth et al, Flora of North America north of Mexico Vol 25 Poaceae, part 2 (2003) (386), F.W.Gould, The Grasses of Texas (1975) (234, Fig. 234 as Panicum fasciculatum), A.S.Hitchcock, Manual of the Grasses of the West Indies (1936) (250, Fig. 200 as Panicum fasciculatum), S.A.Renvoize, The Grasses of Bahia, 1984 (130, Fig. 45, as Panicum fasciculatum), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 727), G.G.Potgar, C.B.Salunkhe & S.R.Yadav, Grasses of Maharashatra (2012) (Fig.128?).


**Derivation** (Clifford & Bostock 2007): L. cimex, bug; -ina, resemblance. Mature spikelets bear a fanciful resemblance to a small bug.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 30–120 cm long. Culm-nodes bearded. Leaf-sheaths loose, open for most of their length, with flat margins, 1.5–12 cm long, without keel, striately veined, hirsute, with tubercle-based hairs. Ligule a fringe of hairs. Leaf-blade base amplexicaul. Leaf-blades lanceolate or ovate, 3–15 cm long, 5–20 mm wide. Leaf-blade midrib evident, prominent beneath. Leaf-blade venation distinct. Leaf-blade surface ribbed, glabrous (except midrib). Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acute, simple.

**Inflorescence.** Inflorescence composed of racemes. Racemes 4–11, digitate or borne along a central axis (then corymbose and only lowest node whorled), unilateral, 7–25 cm long. Central inflorescence axis 0–10 cm long, puberulous. Rachis angular, scabrous on surface. Spikelet packing irregular. Raceme-bases filiform (0.2–0.5 of raceme), 10–30 mm long, pilose, hairy at base. Spikelets ascending, in pairs or clustered at each node. Fertile spikelets pedicelled, 2–4 in the cluster. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension or with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, 3.5–5.5 mm long, falling entire.

**Glumes.** Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, cartilaginous, without keels, 5 -veined. Upper glume margins ciliate (hairs 1–2mm). Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, fenestrate (at base), 5 -veined, acuminate. Fertile lemma oblong or ovate, 3–5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 2–4.5 mm long overall. Palea 1 length of lemma, chartaceous. Palea surface papillose, glabrous. Palea apex entire.

**Flower and Fruit.** Anthers 3, linear, 0.5–1 mm long, anther tip smooth. Stigmas purple. Styles 0.5–1 mm long. Ovary glabrous. Caryopsis ovoid, laterally compressed.

\( n = 18 \) (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia, Tropical Asia, Australasia, North America (*), South America.


**TYPE** from Nigeria. **Basionym or Replaced Name:** Urochloa paniculata Benth., Hook. Niger Fl. 558. (1849). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Ansell s.n., At the confluence of the Niger on Stirling Hill, Nigeria (K).

**Illustrations (Books):** H.Jacques-Felix, Les Graminees d'Afrique tropicale (1962) (233, Fig. 158), J.Bosser, Graminees des Paturage et des Cultures a Madagascar (1969) (347, Fig. 130).

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending or decumbent, 60–150 cm long. Culm-nodes glabrous. Ligule a fringe of hairs. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 4–12 cm long, 8–20 mm wide. Leaf-blade margins glabrous.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3.5–4.5 mm long, falling entire.

**Glumes.** Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 - veined. Upper glume margins ciliate (hairs 0.5mm). Upper glume apex acute or acuminate.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Fertile lemma oblong, 3–4 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 2.5–7 mm long overall. Palea chartaceous. Palea surface smooth, glabrous.

**Distribution (TDWG).** Continent: Africa.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *papilla*, nipple; -*osa*, abundance. With papillae on the glumes or lemmas.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths thickened and forming a bulb, pubescent. Culms erect or geniculately ascending, 40–70 cm long. Ligule a fringe of hairs. Leaf-blades 4–25 cm long, 2–8(–10) mm wide. Leaf-blade margins tuberculuate-ciliate.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.5–5 mm long, falling entire.

**Glumes.** Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, cartilaginous, without keels, 5 -veined. Upper glume margins ciliate. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 1 length of spikelet, cartilaginous, fenestrate (at base), 5 -veined, acute. Fertile lemma lanceolate, 2–4.5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 0.5–4 mm long overall. Palea chartaceous. Palea surface papillose, glabrous.

**Distribution (TDWG).** Continent: Africa.


**Derivation** (Clifford & Bostock 2007): L. *semi*, half; *ala*, wing; - *ata*, possessing; Upper glumes winged.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short, woody. Butt sheaths thickened and forming a bulb (base at times flabellate), pubescent or woolly. Culms erect or geniculately ascending, 20–150 cm long. Culm-internodes eglandular, ridged, smooth, distally glabrous. Culm-nodes bearded. Lateral branches lacking. Leaves basal and cauline. Leaf-sheaths loose, open for most of their length, with flat margins, 2–15 cm long, longer than adjacent culm internode, wider than blade at the collar, without keel, striately veined, glabrous on surface or woolly, with simple hairs or tubercle-based hairs, outer margin hairy. Leaf-sheath oral hairs bearded. Ligule a ciliate membrane (ca 0.75mm) or a fringe of hairs. Collar glabrous or pubescent. Leaf-blade base tapering to the midrib or simple (rarely). Leaf-blades flat or convolute, 10–50 cm long, 1–10 mm wide, light green or glaucous. Leaf-blade midrib evident, prominent beneath. Leaf-blade venation distinct. Leaf-blade surface scabrous, rough on both sides, glabrous or hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade margins glabrous or tuberculate-ciliate. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–4(–8), digitate, unilateral, 2–22 cm long. Rhachis angular, with scattered hairs (rarely) or villous on surface. Spikelet packing irregular. Spikelets solitary (rarely) or in pairs or clustered at each node. Fertile spikelets pedicelled, 2–4 in the cluster. Pedicels present, angular, ciliate or villous, hairy all along but hairs longer above, tip cupuliform.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 4–7.5 mm long, falling entire.

**Glumes.** Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.7 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper
glume ovate, 1 length of spikelet, membranous, light green (rarely with transverse purple bands), without keels, 5 -veined. Upper glume surface puberulous. Upper glume margins ciliate. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 1 length of spikelet, chartaceous, fenestrate (at base), 5 -veined, truncate. Fertile lemma lanceolate, 3.5–7 mm long, chartaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma margins involute, ciliate. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 1.5–3 mm long overall. Palea chartaceous. Palea surface smooth, pubescent. Rachilla extension 0–0.1 length of fertile floret.

**Flower and Fruit.** Lodicules 2, cuneate. Anthers 2 or 3, 0.3 mm long, brown. Styles 0.3 mm long. Ovary glabrous. Caryopsis ovoid, 1.3–1.5 mm long.

*Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 1.5–3 mm long overall. Palea chartaceous. Palea surface smooth, pubescent. Rachilla extension 0–0.1 length of fertile floret.*
**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or oblong, laterally compressed, 2–2.5 mm long, falling entire.

**Glumes.** Glumes connate along margins below, similar, reaching apex of florets. Lower glume oblong, 2–2.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pubescent. Lower glume apex obtuse. Upper glume oblong, 2–2.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pubescent. Upper glume apex obtuse.

**Florets.** Fertile lemma elliptic, 2–2.5 mm long, membranous, keeled, 4 -veined, more than 3-veined. Lemma margins connate below. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.35–0.45 way up back of lemma, 1–1.5 mm long overall, not or scarcely exserted from spikelet. Palea absent or minute.


\[ n = 7 \text{ (2 refs TROPICOS), or 14 (1 ref TROPICOS).} \]
\[ 2n = 14 \text{ (10 refs TROPICOS).} \]

**Distribution (TDWG).** Continent. Europe, Temperate Asia, Tropical Asia, Australasia (*), North America, South America.

**Region.** Northern Europe. Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


**TYPE** from Russia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Mt. Adzituko: Albov 17 (LE holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Nicolas Mikhailowitch Alboff (1866–1897) Russian tobanist and traveller.

**Classification.** Subfamily Pooideae. Tribe: Poeae.
**Habit, Vegetative Morphology.** Perennial, culms solitary. Rhizomes short. Butt sheaths herbaceous, glabrous. Culms 10–30 cm long. Ligule an eciliate membrane, 0.3–0.7 mm long. Leaf-blades 1.5–4 mm wide. Leaf-blade surface smooth to scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Panicle spiciform, elliptic, 0.9–1.8 cm long, 0.6–1.1 cm wide. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present. Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–5 mm long, falling entire.

**Glumes.** Glumes similar, exceeding apex of florets. Lower glume oblong, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pubescent. Lower glume apex acute, awned, 1 -awned, awn 0.7–1.5 mm long. Upper glume oblong, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pubescent. Upper glume apex acute, awned, 1 -awned, awn 0.7–1.5 mm long. Fertile lemma ovate, 2–3 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins ciliolate, hairy above. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, curved, 3.5–6 mm long overall, clearly exserted from spikelet. Palea 0.5 length of lemma. Flower and Fruit. Lodicules absent. Anthers 3, 1.3–2 mm long. Stigmas protogynous, terminally exserted, pubescent. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

**Alopecurus apiatus** Ovczin., Komarov, *Fl. URSS* 2: 146, 744 (1934).


**Illustrations (Books):** N.L.Bor, *Gramineae in Flora of Iraq* (1968) (296, Pl. 106).

**Derivation** (Clifford & Bostock 2007): L. crisped. Inflorescence invested in curly hairs which turn red at maturity.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, linear, 1.5–4 cm long, 0.8–1.1 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4.5–5 mm long, falling entire.

**Glumes.** Glumes connate along collars below, 0.2–0.25 of their length connate, similar, reaching apex of florets, recurved at apex. Lower glume lanceolate, 4.5–5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose. Lower glume apex acute. Upper glume elliptic, 4.5–5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 4.5–5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma surface puberulous, hairy above. Lemma margins connate below. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 8–9 mm long overall, clearly exserted from spikelet, with twisted column.


**Distribution (TDWG).** Continent. Temperate Asia.

Country /Province /State. **Middle Asia, Western Asia.** Turkmenistan. Iran, Iraq.

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**Derivation** (Clifford & Bostock 2007): L. arundo, reed; -acea, like. Culm tall, thereby resembling a reed.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Culms erect, 23–105 cm long, 2 -noded. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane, 1.5–5 mm long, truncate or obtuse. Leaf-blades 6–40 cm long, 3–10 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.
Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, linear, 1.7–7 cm long, 0.6–1.4 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3.5–7 mm long, falling entire.

Glumes. Glumes connate along margins below, 0.25 of their length connate, similar, reaching apex of florets or exceeding apex of florets, recurved at apex. Lower glume lanceolate, 3.5–7 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose, hairy on veins. Lower glume hairs 1–2 mm long. Lower glume apex acute. Upper glume lanceolate, 3.5–7 mm long, 1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose, hairy on veins. Upper glume hairs 1–2 mm long. Upper glume apex acute.

Florets. Fertile lemma ovate, 3.5–5.8 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.33 of their length connate. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.4 way up back of lemma, straight or curved, 5–7.5 mm long overall, not or scarcely exserted from spikelet.


Distribution (TDWG). Continent: Europe, Temperate Asia, Tropical Asia, North America (*). Region: Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.

Country /Province /State. : Denmark, Finland, Norway, Sweden. : Germany, Poland, Switzerland. : Portugal, Spain. : Bulgaria, Greece, Italy, Romania, Turkey Europe, Yugoslavia. Estonia, Latvia, Lithuania, Baltic States, Krym, Central European Russia, East European Russia, North European Russia, South European Russia, Northwest European Russia, Ukraine. Siberia, Russian Far East, Middle Asia, Caucasus, Western Asia, China, Mongolia, Russia. Buryatiya, Chita, Irkutsk, Tuva. Amur, Kuril Is, Magadan, Primorye. Kazakhstan, Kirgizistan, Turkmenistan, Tadzhikistan, Uzbekistan. Iran, Iraq. Inner Mongolia, Manchuria, China North-Central, Qinghai, Xinjiang. Mongolia. Indian Subcontinent. Pakistan, West Himalaya. North-central USA. North Dakota.

Gansu.


TYPE from Iran. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Mt. Elbrus: Aucher 5457 (G syn).

Illustrations: None found.


Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, elliptic or oblong. 1.3–2.5 cm long, 1–1.5 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4.5–5 mm long, falling entire.
Glumes. Glumes connate along margins below, 0.1 of their length connate, similar, exceeding apex of florets. Lower glume lanceolate, 4.5–5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose. Lower glume apex acuminate, awned, 1 -awned, awn 1–2 mm long. Upper glume lanceolate, 4.5–5 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume apex acuminate, awned, 1 -awned, awn 1–2 mm long.

Florets. Fertile lemma oblong, 3–4 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, straight or geniculate, 6.5–10 mm long overall, clearly exserted from spikelet, without a column or with twisted column. Palea absent or minute.


Country /Province /State. Caucasus, Western Asia. Transcaucasus. Iran.


Derivation (Clifford & Bostock 2007): Gk. baptoi, bright-colored; arrhen, male. The persistent anthers are initially yellow, then reddish-brown.


Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms erect or geniculately ascending, 10–30 cm long. Leaf-sheaths loose. Ligule an eciliate membrane, 3–6 mm long, acute. Leaf-blades flat or conduplicate, 5–10 cm long, 1–3 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear or oblong, 2.5–4.5 cm long. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–4.5 mm long, falling entire.

Glumes. Glumes connate along margins below, similar, reaching apex of florets. Lower glume oblong, 3–4.5 mm long, 1 length of upper glume, membranous, much thinner above, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pubescent. Lower glume hairs 0.5 mm long. Lower glume apex obtuse. Upper glume oblong, 3–4.5 mm long, 1 length of adjacent fertile lemma, membranous, much thinner above, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pubescent. Upper glume hairs 0.5 mm long. Upper glume apex obtuse.

Florets. Fertile lemma elliptic, 3–4.5 mm long, membranous, keeled, 4 -veined, more than 3-veined. Lemma margins connate below, with 0.33–0.5 of their length connate. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, straight, 3 mm long overall, clearly exserted from spikelet (1–1.6mm). Palea absent or minute.


**Illustrations (Books):** F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, Flora Argentina 3 – 2 Pooideae (2012) (128), A.Burkat, Flora Ilustrada de Entre Rios (Argentina), Pt II, Gramineas (1969) (131, Fig. 43), A.L.Cabrera, Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas (1970) (214, Fig. 55), M.N.Correa, Flora Patagonica Parte III, Gramineas (1978) (343, Fig. 230), B.Rosengurtt, Gramineas Uruguayas I (1970) (22, Fig. 3).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms geniculately ascending, 5–30 cm long. Ligule an eciliate membrane, 2–3.5 mm long, obtuse. Leaf-blades 3–6 cm long, 2.5–3 mm wide. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, subtended by an inflated leaf-sheath, exserted or embraced at base by subtending leaf. Peduncle cylindrical at apex. Panicle spiciform, oblong or ovate, 1–3 cm long, 0.4–0.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2.6–2.8 mm long, falling entire.

**Glumes.** Glumes connate along margins below, 0.33 of their length connate, similar, exceeding apex of florets. Lower glume ovate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scabrous, ciliate (below / tip). Lower glume surface pubescent. Lower glume apex obtuse. Upper glume ovate, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous, ciliate (below / tip). Upper glume surface pubescent. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, 2.5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.33 of their length connate. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 3–3.5 mm long overall, with twisted column.

**Flower and Fruit.** Lodicles absent. Anthers 3, 0.5–0.6 mm long. Stigmas protogynous, terminally exserted, pubescent. Ovary glabrous. Caryopsis with adherent pericarp, 1.3–1.5 mm long. Hilum punctiform.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State. Southern South America.** Argentina Northeast, Argentina South. Buenos Aires, Distrito Federal, Entre Rios, La Pampa, Santa Fe. Chubut.


**TYPE** from Russia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Amu Darya: Nadezhina (LE holo).

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending or decumbent, 10–30 cm long. Ligule an eciliate membrane, 1.5–4 mm long. Leaf-blades 1.2–4 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, 2–6 cm long, 0.2–0.45 cm wide. Primary panicle branches acrascent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs, puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2.7–3.2 mm long, falling entire.

**Glumes.** Glumes connate along margins below, 0.25–0.33 of their length connate, similar, shorter than spikelet. Lower glume elliptic, 2.5–3 mm long, 1 length of upper glume, cartilaginous, 1-keeled, winged on
keel, 3 -veined. Lower glume primary vein ciliolate. Lower glume apex acute. Upper glume elliptic, 2.5–3 mm long, 0.9 length of adjacent fertile lemma, cartilaginous, 1-keeled, winged on keel, 3 -veined. Upper glume primary vein ciliolate. Upper glume hairs 0.2 mm long. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 2.7–3.2 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below. Lemma apex truncate, muticous. Palea absent or minute.

**Flower and Fruit.** Lodicules absent. Anthers 3, 0.5–0.8 mm long. Stigmas terminally exserted, pubescent. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Middle Asia. Uzbekistan.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Palestine. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Palestine: Coll?.

Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 6–6.5 mm long, falling entire.

Glumes. Glumes connate along margins below, 0.33 of their length connate, similar, exceeding apex of florets, parallel to lemmas. Lower glume oblong, 1 length of upper glume, membranous, 1-keeled, winged on keel, winged narrowly, 3 -veined. Lower glume primary vein scabrous, ciliate (below). Lower glume apex acute. Upper glume oblong, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, winged on keel, 3 -veined. Upper glume primary vein scabrous, ciliate (below). Upper glume apex acute.

Florets. Fertile lemma lanceolate, 5.5–6 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.33 of their length connate. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0–0.1 way up back of lemma, geniculate, 8–12 mm long overall, with twisted column.


**Country /Province /State.** Western Asia. Palestine, Israel & Jordan.


Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, oblong, 2–3.5 cm long, 1 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4–5 mm long, falling entire.

Glumes. Glumes connate along margins below, 0.33 of their length connate, similar, reaching apex of florets, recurved at apex. Lower glume elliptic, 4–5 mm long, 1 length of upper glume, cartilaginous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pubescent. Lower glume hairs 0.2 mm long. Lower glume apex acute. Upper glume elliptic, 4–5 mm long, 1 length of adjacent fertile lemma, cartilaginous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pubescent. Upper glume apex acute.

Florets. Fertile lemma ovate, 4–5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 10–12 mm long overall, clearly exserted from spikelet, with twisted column. Palea absent or minute.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 15–50 cm long, swollen at the base, forming an ovoid corm. Ligule an eciliate membrane, 2–6 mm long. Leaf-blades flat or convolute, 1.5–12 cm long, 1–3.5 mm wide. Leaf-blade surface smooth.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 1.5–7 cm long, 0.3–0.5 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis or with lateral stumps on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–4 mm long, falling entire.


Florets. Fertile lemma oblong, 2.5–3.5 mm long, membranous, keeled, 4 -veined, more than 3-veined. Lemma margins connate below. Lemma apex truncate, pubescent, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 5–7 mm long overall, clearly exserted from spikelet, with a straight or slightly twisted column. Palea absent or minute.


2n = 14 (1 ref TROPICOS).


TYPE from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: : Based on Cornucopiae perennans ; USA, South Carolina: Walter.


Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Carolina, USA.


Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 2–6 cm long, 0.4–0.6 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.8–3 mm long, falling entire.

Glumes. Glumes connate along margins below, 0.25–0.33 of their length connate, similar, reaching apex of florets. Lower glume ovate, 1.8–3 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 1.8–3 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume margins ciliate. Upper glume apex acute.

Florets. Fertile lemma ovate, 1.8–2 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 3–5 mm long overall, with twisted column. Palea absent or minute.

Flower and Fruit. Lodicules absent. Anthers 3, 0.3–0.5 mm long. Stigmas protogynous, terminally exserted, pubescent. Ovary glabrous. Caryopsis with adherent pericarp, 1–1.4 mm long. Embryo 0.25 length of caryopsis. Hilum punctiform.

2n = 14 (1 ref TROPICOS), or 28 (1 ref TROPICOS).


Country /Province /State. Western Canada, Eastern Canada, Northwest USA, North-central USA, Southwestern USA, South-central USA, Southeastern USA. British Columbia, Saskatchewan, Quebec, Idaho, Missouri, California, Texas, Alabama, Arkansas, Delaware, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia.


Derivation (Clifford & Bostock 2007): L. -icum, belonging to. From Crete.


**Inflorescence.** Inflorescence a panicle, subtended by an unspecialized leaf-sheath or an inflated leaf-sheath. Panicle spiciform, linear, 2–3.5 cm long, 0.4–0.5 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–4 mm long, falling entire.

**Glumes.** Glumes connate along margins below, 0.5–0.8 of their length connate, similar, exceeding apex of florets, recurved at apex. Lower glume lanceolate, 3–4 mm long, 1 length of upper glume, membranous, 1-keeled, winged on keel, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose, hairy above. Lower glume apex obtuse, mucronate. Upper glume lanceolate, 3–4 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, winged on keel, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose, hairy above. Upper glume apex obtuse, mucronate.

**Florets.** Fertile lemma oblong, 2.7–3.5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.5–0.66 of their length connate. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, geniculate, 3–6 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicules absent. Anthers 3, 1.2–2.5 mm long. Stigmas terminally exserted, pubescent. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG). Continent.** Europe, Temperate Asia, South America.

**Region. Southeastern Europe.**

**Country /Province /State.** Bulgaria, Greece, Crete, Yugoslavia. **Western Asia.** Turkey. **Southern South America.** Argentina Northeast, Argentina South.


**TYPE from Russia.** T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Kerigo: *Radde* (LE holo).

**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** Gk. *dasys*, hairy; *anthos*, flower. Glumes and lemmas densely hairy.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths scarious, persistent and investing base of culm, with compacted dead sheaths. Culms erect or geniculately ascending, 15–30 cm long. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane. Leaf-blades filiform, conduplicate or involute, 5–10 cm long, 2–3 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform or capitate, elliptic or globose, 1–1.7 cm long, 1–1.2 cm wide. Spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–4.5 mm long, falling entire.

**Glumes.** Glumes connate along margins below, similar, reaching apex of florets, recurved at apex. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume margins ciliate. Lower glume apex acuminate, awned, 1 -awned, awn 1–1.5 mm long. Upper glume lanceolate, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume margins ciliate. Upper glume apex acuminate, awned, 1 -awned, awn 1–1.5 mm long.

**Florets.** Fertile lemma ovate, 3–4.5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising
0.25 way up back of lemma, geniculate, 9 mm long overall, clearly exserted from spikelet, with twisted column. Palea absent or minute.


2n = 14 (2 refs TROPICOS), or 28 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Caucasus, Western Asia. North Caucasus, Transcaucasia. Iran.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Turkey. T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: Samos: Davis 1688 (K holo, E).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Peter Hadland Davis (1918-) Scots botanist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Butt sheaths villous. Culms erect, 7.5–38 cm long, 1 -noded. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5–2 mm long, acute. Leaf-blades convolute, 1–5 cm long, 1–3 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate. Leaf-blade apex obtuse, simple or apiculate.

**Inflorescence.** Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle capitate, ovate, 0.9–2 cm long, 0.7–1 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3.5–4.5 mm long, falling entire.

**Glumes.** Glumes connate along margins below, similar, reaching apex of florets. Lower glume lanceolate, 3.5–4.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose. Lower glume apex acute, awned, 1 -awned, aown 1–1.5 mm long. Upper glume lanceolate, 3.5–5.5 mm long, 1 length of adjacent fertile lemma, membranous, 1- keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume apex acute, awned, 1 -awned, aown 1–1.5 mm long.

**Florets.** Fertile lemma oblong, 3.5–4 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.33 of their length connate. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, geniculate, 7–10 mm long overall, with twisted column. Palea absent or minute.


**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Western Asia. East Aegean Is.


Habit, Vegetative Morphology. Perennial. Culms decumbent, 15–45 cm long, 1–5 -noded, rooting from lower nodes. Ligule an eciliate membrane, 2–5 mm long. Leaf-blades 2–12 cm long, 2–7 mm wide. Leaf-blade surface scaberulous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 1.5–7 cm long, 0.3–0.7 cm wide. Primary panicle branches accrescent to a central axis, with lateral stumps on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2.5–3.5 mm long, falling entire.

Glumes. Glumes connate along margins below, similar, exceeding apex of florets or reaching apex of florets. Lower glume oblong, 2.5–3.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pubescent. Upper glume oblong, 2.5–3.5 mm long, 1–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 2.5–3.5 mm long, membranous, keeled, 4 -veined, more than 3-veined. Lemma margins connate below. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, 3.5–5 mm long overall, clearly exserted from spikelet. Palea absent or minute.


n = 7 (1 ref TROPICOS). 2n = 28 (11 refs TROPICOS).


Alopecurus gerardii (All.) Vill. Fl. Delph. 5; Hist. Pl. Dauph. 2: 66. t. 2. (1787).


**TYPE** from France. **Basionym or Replaced Name:** Phleum gerardii All., Fl. Pedem. 2: 232 (1785).

Illustrations: None found.


Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, ovate, 1–2 cm long, 0.7–1 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–6.3 mm long, falling entire.

Glumes. Glumes connate along margins below, 0.1 of their length connate, similar, exceeding apex of florets, recurved at apex. Lower glume lanceolate, 4–6.3 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose. Lower glume apex mucronate or awned, 1 -awned, awn 0.5–1.5 mm long. Upper glume lanceolate, 4–6.3 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume mucronate or awned, 1 -awned, awn 0.5–1.5 mm long.

Florets. Fertile lemma oblong, 3–4 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma surface with conspicuous apical hairs. Lemma margins free. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, straight, 0.8–6 mm long overall, not or scarcely exserted from spikelet. Palea linear, 2.5–3.5 mm long, 1 -veined, 1-keeled. Palea keels ciliate, adorned above, with 0.5 of their length adorned. Palea apex acuminate.

Flower and Fruit. Lodicules absent. Anthers 3, 2–2.5 mm long. Stigmas terminally exserted, pubescent.

2n = 14 (3 refs TROPICOS).


Region. Southwestern Europe, Southeastern Europe.

Country /Province /State. : France, Spain. : Albania, Bulgaria, Greece, Italy, Yugoslavia. **Western Asia.** Turkey.


**TYPE** from Turkey. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: C. Koch s.n., Aug 1843, Turkey: A8 Rize: auf dem Rcken des pontischen Gebirges, im Gaue Hemschin, auf Granitboden, 2652 m (B(destroyed); IT: G).

Illustrations: None found.


Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, oblong or ovate, 0.9–2.5 cm long, 0.6–0.9 cm wide. Primary panicle branches accrescent to a central axis, with

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3.5–5.5 mm long, falling entire.

**Glumes.** Glumes connate along margins below, 0.1 of their length connate, similar, exceeding apex of florets, recurved at apex. Lower glume lanceolate, 3.5–5.5 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose. Lower glume apex setaceously acuminate, mucronate. Upper glume lanceolate, 3.5–5.5 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, purple, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume apex setaceously acuminate, mucronate.

**Florets.** Fertile lemma oblong, 3–4 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, straight or geniculate, 3–4.4 mm long overall, not or scarcely exserted from spikelet, without a column or with twisted column. Palea present or absent or minute, linear, 2–2.6 mm long, 1 -veined, 1-keeled.


2n = 42 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Caucasus, Western Asia. Iran.

**Alopecurus hebeochloides** Hack. Fedde, Repert. 10:166 (1911).


**TYPE** from Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Chile, Colina to Batuco: Reiche (W holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk -oides, resembling. Resembling Heleochloa in some respect.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms geniculately ascending, 3–8 cm long, 2–3 -noded. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 2–3 mm long, obtuse or acute. Leaf-blades 4–10 cm long, 2–3 mm wide, flaccid. Leaf-blade surface scaberulous, glabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, shorter than basal leaves, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Panicle spiciform, ovate, loose, 1–1.5 cm long, 0.6–0.8 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, truncate, 3 mm long, 1.5 mm wide, falling entire.

**Glumes.** Glumes similar, shorter than spikelet or reaching apex of florets, recurved at apex. Lower glume oblong, 3 mm long, 1 length of upper glume, membranous, much thinner above, much thinner on margins, 1-keeled, 3 -veined. Lower glume primary vein ciliolate. Lower glume lateral veins distinct, convergent at apex. Lower glume surface hispidulous, hairy on veins. Lower glume apex obtuse. Upper glume oblong, 3 mm long, 0.9–1 length of adjacent fertile lemma, membranous, much thinner above, with hyaline margins, 1-keeled, 3 -veined. Upper glume primary vein ciliolate. Upper glume lateral veins convergent at apex. Upper glume surface hispidulous, hairy on veins. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, 3 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.75–0.8 of their length connate. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.6 way up back of lemma, straight, 1–1.5 mm long overall, not or scarcely exserted from spikelet. Palea absent or minute.
Flower and Fruit. Lodicules absent. Anthers 2, 1 mm long. Ovary glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


TYPE from India. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: India, Kashmir: Falconer (K holo).

Illustrations: None found.
Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From the Himalayas.


Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, elliptic or ovate, 1.5–3.2 cm long, 0.8–1.2 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–5 mm long, falling entire.

Glumes. Glumes connate along margins below, 0.1 of their length connate, similar, exceeding apex of florets, parallel to lemmas or recurved at apex. Lower glume lanceolate, 3–5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface villous. Lower glume hairs 2–3 mm long. Lower glume apex acute to setaceously acuminate. Upper glume lanceolate, 3–5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface villous. Upper glume hairs 2–3 mm long. Upper glume apex acute to setaceously acuminate.

Florets. Fertile lemma oblong, 2.7–4.5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.33–0.5 of their length connate, eciliate or ciliate, hairy above. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, geniculate, 9.5 mm long overall, clearly exserted from spikelet, with twisted column. Column of lemma awn 4.5 mm long.


Region. Southeastern Europe.


Illustrations (Journals): Ruizia (13:209, Fig 22d-f (1993)).


Inflorescence. Inflorescence a panicle. Panicle spiciform, linear or oblong, 1.5–3.5 cm long. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–3.2 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets. Lower glume oblong, 3–3.2 mm long, 1 length of upper glume, membranous, purple or black, 1-keeled, 3 -veined. Lower glume apex truncate. Upper glume oblong, 3–3.2 mm long, 1 length of adjacent fertile lemma, membranous, purple or black, 1-keeled, 3 -veined. Upper glume apex truncate.

Florets. Fertile lemma elliptic, 3–3.2 mm long, membranous, keeled, 4 -veined, more than 3-veined. Lower glume apex truncate, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, straight, 1–1.5 mm long overall, not or scarcely exserted from spikelet. Palea absent or minute.

Derivation (Clifford & Bostock 2007): L. -ica, belonging to; Japan, a modified spelling Zhapan introduced into Europe by Marco Polo as a transliteration for the Chinese name for the large islands to the east of that country. From Japan.


Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, linear, 3–10 cm long, 0.5–1 cm wide. Primary panicle branches accrescent to a central axis. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.3–0.8 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 5–6 mm long, falling entire.

Glumes. Glumes free, similar, shorter than spikelet, shiny. Lower glume elliptic, 4.2–4.5 mm long, 1.1 length of upper glume, membranous, light green, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume apex acute. Upper glume elliptic, 4–4.3 mm long, 0.8 length of adjacent fertile lemma, membranous, light green, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Fertile lemma ovate, 5–6 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins free or connate below. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 10–12 mm long overall, with twisted column. Palea absent or minute.
Flower and Fruit. Lodicules absent. Anthers 3, 1 mm long, pallid or yellow. Stigmas protogynous, terminally exserted, pubescent. Ovary glabrous. Caryopsis with adherent pericarp, 2–2.5 mm long. Hilum punctiform.


Illustrations: None found.
Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Butt sheaths glabrous. Culms erect, 5–20 cm long, 1–2 -noded. Culm-internodes distally glabrous. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.3–1 mm long, erose, truncate. Leaf-blades flat or convolute, 1–8 cm long, 0.5–2.5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins smooth or scaberulous. Leaf-blade apex obtuse to acuminate.
Inflorescence. Inflorescence a panicle, subtended by an unspecialized leaf-sheath or an inflated leaf-sheath. Panicle capitate, elliptic or ovate, 0.8–2 cm long, 0.8–1.4 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.
Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3.5–4 mm long, falling entire.
Glumes. Glumes free or connate along margins below, 0–0.1 of their length connate, similar, exceeding apex of florets. Lower glume linear, 3.5–4 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface villous. Lower glume apex acute, awned, 1 -awned, awn 0.8–2 mm long, awn ciliate. Upper glume linear, 3.5–4 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface villous. Upper glume apex acute, awned, 1 -awned, awn 0.8–2 mm long, awn ciliate.
Florets. Fertile lemma oblong, 2.4–3 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins connate below. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.25 way up back of lemma, geniculate, 7–9 mm long overall, with twisted column. Palea apex obtuse or minute.
Country /Province /State. Western Asia. Turkey.

Alopecurus lanatus Sibth. & Sm. Prod. 1: 43. (1806).
TYPE from Turkey. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Turkey, Olympi Bythyni: Sibthorp (OXF holo, BM).
Illustrations: None found.
**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Butt sheaths pubescent. Culms erect, 3.5–30 cm long, 1-noded. Culm-internodes distally pubescent. Leaves mostly basal. Leaf-sheaths pubescent. Ligule an eciliate membrane, 1.5–2.5 mm long, acute. Leaf-blades convolute, 1.5–5 cm long, 2–3 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides. Leaf-blade apex obtuse, simple or apiculate.

**Inflorescence.** Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle capititate, ovate or globose, 0.8–1.5 cm long. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3.5–5 mm long, falling entire.

**Glumes.** Glumes connate along margins below, 0.1 of their length connate, similar, exceeding apex of florets. Lower glume lanceolate, 3.5–5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface hispid. Lower glume apex acute, awned, 1 -awned, awn 1–1.5 mm long. Upper glume lanceolate, 3.5–5 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface hispid. Upper glume apex acute, awned, 1 -awned, awn 1–1.5 mm long.

**Florets.** Fertile lemma oblong, 2.4–3.5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma surface pilose, hairy above. Lemma margins connate below, with 0.1 of their length connate. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.15–0.2 way up back of lemma, geniculate, 6.5–11 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit.** Lodicles absent. Anthers 3, 1.8–2.7 mm long. Stigmas terminally exserted, pubescent. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

\( n = 7 \) (1 ref TROPICOS).

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** Western Asia. Turkey.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Willibeld Lechler (1814–1856) German apothecary and traveller who collected in South America.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State.** Southern South America. Chile South. Los Lagos.


**TYPE** from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Khakhe: Maximovich (LE holo, K).

**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poeaceae (2007) (Fig. 513).

**Derivation** (Clifford & Bostock 2007): *L. longus*, long; *arista*, bristle. Lemmas or glumes long awned.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending, 15–35 cm long. Leaf-sheaths loose, smooth. Ligule an eciliate membrane, 3–4 mm long, acute. Leaf-blades 3–10 cm long, 1–2 mm wide.
Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath, embraced at base by
subtending leaf. Panicle spiciform, linear, 4–7 cm long, 0.3–0.5 cm wide. Spikelets solitary. Fertile
spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1
fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, falling entire.

Glumes. Glumes similar, shorter than spikelet. Lower glume oblong, 1 length of upper glume,
membranous, much thinner on margins, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower
glume apex acute. Upper glume oblong, 1 length of adjacent fertile lemma, membranous, with hyaline

Florets. Fertile lemma lanceolate, 2.5–3 mm long, membranous, keeled, 3 -veined, 0–3 -veined.
Lemma apex acuminate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of
lemma, geniculate, 5–9 mm long overall, clearly exerted from spikelet, with twisted column. Palea absent
or minute.

Flower and Fruit. Lodicles absent. Anthers 3, 0.5–0.7 mm long. Stigmas protogynous, terminally

2n = 14 (1 ref TROPICOS).


Alopecurus magellanicus Lam. Illus. 1:168 (1791).

Accepted by: R.J.Soreng et al., Catalogue of New World Grasses (2000–2003) and online,
W.D.Clayton & K.Harman, GrassBase (2008) and online, U.Quattrocchi, CRC World Dictionary of

TYPE from Chile. T: <Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Chile,
Magellan: Commerson (P holo).


(130 &131), C.E.Hubbard, Grasses (1968) (336, as A. alpinus), M.E.Barkworth et al, Flora of North
(241, Fig 47), E.G.Nicora, Los Generos de Gramineas de America Austral (1987) (168, Fig. 42),
A.L.Cabrera, Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas (1970) (214, Fig. 55 as A.
antarticus var. brachyatherus), M.N.Correa, Flora Patagonica Parte III, Gramineae (1978) (332, Fig 225
as varieties brachyatherus & bracteatus).

Images: Plant Image Collection Smithsonian Institution, R.Darke, The Encylopaedia of Grasses for
Liveable Landscapes (2007); (as A. borealis).

Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From the Straits of Magellan.


Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, 20–100 cm long, 3–6 -
noded. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 4–6 mm long. Leaf-blades 10–35
cm long, 5–10 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle tipped by a glumaceous appendage. Panicle spiciform,
oblong or ovate, 1.5–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1
fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4.5–6 mm long, falling entire.

Glumes. Glumes similar, exceeding apex of florets. Lower glume lanceolate, 1 length of upper glume,
membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pubescent.
Lower glume hairs 1–2 mm long. Lower glume apex acute. Upper glume lanceolate, 1.3 length of adjacent
fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface
pubescent. Upper glume hairs 1–2 mm long. Upper glume apex acute.

Florets. Fertile lemma ovate, 3.5–4.5 mm long, membranous, keeled, 5 -veined, more than 3-veined.
Lemma margins connate below, with 0.5 of their length connate, ciliolate, hairy above. Lemma apex obtuse,
awned, 1-awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, geniculate, 4.5–9 mm long overall, with twisted column.


**Distribution (TDWG).** Continent. Europe, Temperate Asia, South America, Antarctica.

**Region.** Northern Europe, Eastern Europe.


Mendoza. Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. Rest of Chile- Biobio, La Araucania, Maule, O'Higgins, Santiago, Valparaiso, Chiloé, Aisen, Magellanites. Maule, Biobio, La Araucania. Los Lagos, Aisen, Magellanites.


**TYPE** from Russia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Russia, Pamir: Paulsen 772 (Cholo, LE).

**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L. *mucro*, sharp point; -ata, possessing. With glumes or lemmas contracted into a short hard point or bifid and shortly awned from between the teeth.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Butt sheaths glabrous. Culms erect, 7–14 cm long. Leaves mostly basal. Ligule an eciliate membrane. Leaf-blades flat or conduplicate, 6–10 cm long, 4 mm wide, stiff. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform or capitulate, oblong or ovate, 1.5–2 cm long, 1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or ovate, laterally compressed, 4 mm long, falling entire.


**Florets.** Fertile lemma ovate, 4 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, 4 mm long overall. Palea absent or minute.


**Distribution (TDWG).** Continent. Temperate Asia.

**Country/Province/State.** Middle Asia, Western Asia. Turkmenistan. Iran.

**Alopecurus myosuroides** Huds. *Fl. Angl.* 23 (1762).


**TYPE** from Britain. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: In arvis et ad vias, *Hudson s.n.*

Derivation (Clifford & Bostock 2007): Gk. mys, mouse; ourus, tail; -oides, resemblance. Inflorescence resembling the tail of a mouse.


Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending or decumbent, 20–80 cm long. Ligule an eciliate membrane, 2–5 mm long. Leaf-blades 3–16 cm long, 2–8 mm wide. Leaf-blade surface scaberulous, rough adaxially or on both sides.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, tapering above, 2–12 cm long, 0.3–0.6 cm wide. Primary panicle branches accrescent to a central axis, with lateral stumps on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4.5–7 mm long, falling entire.

Glumes. Glumes connate along margins below, similar, reaching apex of florets. Lower glume lanceolate or oblong, 4.5–7 mm long, 1 length of upper glume, membranous, 1-keeled, winged on keel, winged narrowly, winged above, 3 -veined. Lower glume primary vein ciliolate. Lower glume surface pubescent, hairy below. Lower glume apex acute. Upper glume lanceolate or oblong, 4.5–7 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, winged on keel, winged above, 3 -veined. Upper glume primary vein ciliolate. Upper glume surface pubescent, hairy below. Upper glume apex acute.

Florets. Fertile lemma ovate, 4.5–7 mm long, membranous, keeled, 4 -veined, more than 3-veined. Lemma margins connate below. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 8–14 mm long overall, clearly exserted from spikelet, with twisted column. Palea absent or minute.


n = 7 (1 ref TROPICOS), or 14 (3 refs TROPICOS). 2n = 14 (8 refs TROPICOS).


Region. Northern Europe, Middle East, Southwestern Europe, Southeastern Europe, Eastern Europe.


Illustrations: None found.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, (5–)15–45 cm long. Leaf-sheaths inflated (slightly). Ligule an eciliate membrane, 2–3 mm long, obtuse. Leaf-blades 4–9 cm long. 2.5–3 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, tapering above, 1–5 cm long, 0.3–0.5 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–3.5 mm long, falling entire.

Glumes. Glumes connate along margins below, similar, reaching apex of florets. Lower glume oblong, 3–3.5 mm long, 1 length of upper glume, membranous, 1-keeled, winged on keel, 3-veined. Lower glume primary vein ciliolate. Lower glume surface glabrous. Lower glume apex obtuse or acute. Upper glume oblong, 3–3.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, winged on keel, 3-veined. Upper glume primary vein ciliolate. Upper glume surface glabrous. Upper glume apex obtuse or acute.

Florets. Fertile lemma elliptic, 3–3.5 mm long, membranous, keeled, 4-veined, more than 3-veined. Lemma margins connate below. Lemma apex obtuse or acute, muticous (or with a basal stump). Palea absent or minute.


n = 7 (2 refs TROPICOS).


Punjab, Uttah Pradesh.


T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Loch-ne-gar, the giant of Aberdeenshire.,

Illustrations (Books): T. Cope & A. Gray, Grasses of the British Isles (120).

Distribution (TDWG). Continent. Europe.
Region. Northern Europe.
Country /Province /State. : Great Britain.


**TYPE** from Turkey. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Turkey, Ponte Mts.: Coll?.

Illustrations: None found.
Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From Pontus in ancient times, a Province of Asia Minor, now Turkey.
**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Rhizomes elongated. Butt sheaths light brown, pubescent, persistent and investing base of culm. Culms 20–70 cm long. Ligule an eciliate membrane, 1–1.5 mm long, obtuse. Leaf-blades flat or conduplicate, 3–5 mm wide. Leaf-blade apex acuminated.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear or oblong, 1–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 5–5.5 mm long, falling entire.


**Florets.** Fertile lemma ovate, 4.5–5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma apex attenuate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, curved, 2.5 mm long overall, not or scarcely exserted from spikelet. Palea 0.5 length of lemma, 1 -veined.


**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Caucasus, Western Asia. Turkey.

Alopecurus pratensis L. Sp. Pl. 1:60 (1753).


Glumes. Glumes connate along margins below, similar, reaching apex of florets. Lower glume oblong, 4–6 mm long, 1 length of upper glume, membranous, 1-keeled, 3-veined. Lower glume primary vein ciliate. Lower glume surface pubescent. Lower glume apex acute.

Florets. Fertile lemma elliptic or ovate, 4–6 mm long, membranous, keeled, 4-veined, more than 3-veined. Lemma margins connate below. Lemma apex obtuse, awned, 1-awned. Principal lemma awn dorsal, arising 0.2–0.3 way up back of lemma, 6–10 mm long overall, clearly exserted from spikelet. Palea absent or minute.


2n = 28 (11 refs TROPICOS).


Region. Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


LT: Dalechamps, Hist. Generalis Pl. 1: t. "Gramen pratense" (1587), LT designated (as type) by Dogan, Turk. J. Bot. 23(4): 248 (1999), but incorrect as this illustration is not original material.


**Habit, Vegetative Morphology.** Annual, caespitose, clumped loosely. Rhizomes short. Culms erect or geniculately ascending, 8–40 cm long, 3–4 -noded. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–3 mm long, obtuse. Leaf-blades 0.7–16 cm long, 1–3 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, oblong or ovate, tapering above, 1.1–3.2 cm long, 0.9–1.1 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–8 mm long, falling entire.

**Glumes.** Glumes connate along margins below, 0.33–0.5 of their length connate, similar, reaching apex of florets. Lower glume lanceolate, gibbous, 5–8 mm long, 1 length of upper glume, coriaceous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume apex cuspitate. Upper glume lanceolate, gibbous, 5–8 mm long, 1 length of adjacent fertile lemma, coriaceous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume apex cuspitate.

**Florets.** Fertile lemma oblong, 5–8 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.5 of their length connate. Lemma apex obtuse or acute, awned, 1 -awned. Principal lemma awn dorsal, geniculate, 7–18 mm long overall, with twisted column. Palea absent or minute.


\[2n = 14\ (1\ ref\ TROPICOS)\].

**Distribution (TDWG).** Continent. Europe, Temperate Asia.

**Region.** Northern Europe (*), Southwestern Europe, Southeastern Europe, Middle Europe.

**Country /Province /State.** : GB Aliens (Ryves et al). : Belgium, Germany, Switzerland. : France, Sardinia, Spain. : Albania, Bulgaria, Greece, Italy, Crete, Sicily, Turkey Europe, Yugoslavia. Western Asia. Turkey.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 10–25 cm long. Culm-internodes distally glabrous. Ligule an eciliate membrane, 2 mm long. Leaf-blades 5–12 cm long, 1–5 mm wide.

**Inflorescence.** Inflorescence a panicle, subtended by an inflated leaf-sheath, exserted or embraced at base by subtending leaf. Panicle spiciform, linear or oblong, loose, 2–4 cm long. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–5 mm long, falling entire.

**Glumes.** Glumes similar, exceeding apex of florets. Lower glume oblong, 4–5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface puberulous, hairy on veins. Lower glume apex obtuse. Upper glume oblong, 4–5 mm long, 1.5–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface puberulous, hairy on veins. Upper glume apex obtuse.
Florets. Fertile lemma ovate, 2.7–3 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2–0.25 way up back of lemma, geniculate, 8–12 mm long overall. Palea absent or minute.


Baja California.


TYPE from France. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: France, Marseille: Coll?.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Inflorescence spicate resembling that of Setaria.


Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms erect or geniculately ascending, 12–35 cm long, 2–3 -noded. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–2.5 mm long, erose, obtuse or acute. Leaf-blades 1.2–10 cm long, 0.8–3.5 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, oblong or ovate, 0.8–3.2 cm long, 0.6–1.1 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.2–4.5 mm long, falling entire.

Glumes. Glumes connate along margins below, 0.33 of their length connate, similar, exceeding apex of florets. Lower glume lanceolate, 3.2–4.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume apex acute. Upper glume lanceolate, 3.2–4.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–3.6 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.33 of their length connate. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, geniculate, 6.5–10.5 mm long overall, with twisted column. Palea absent or minute.


Region. Northern Europe (*), Southeastern Europe.


**Derivation** (Clifford & Bostock 2007): *L. textilis*, intertwined. Used for weaving or thatching.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Butt sheaths pubescent, persistent and investing base of culm, with compacted dead sheaths. Culms erect or geniculately ascending, 5–70 cm long. Leaves mostly basal. Leaf-sheaths pubescent. Ligule an eciliate membrane, 0.5–1 mm long, truncate. Leaf-blades filiform or linear, flat or convolute, 15–30 cm long, 1–3 mm wide. Leaf-blade surface smooth. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, elliptic, 1–3 cm long, 0.6–1.5 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4.5–6 mm long, falling entire.

**Glumes.** Glumes connate along margins below, 0.25 of their length connate, similar, exceeding apex of florets. Lower glume lanceolate, 4.5–6 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose. Lower glume apex acute, mucronate or awned, 1 -awned, awn 1–2 mm long. Upper glume lanceolate, 4.5–6 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume apex acute, mucronate or awned, 1 -awned, awn 1–2 mm long.

**Florets.** Fertile lemma oblong, 4–5.5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins connate below. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 8–14(–17) mm long overall, with twisted column. Palea 2.5–4 mm long, 1 -veined, 1-keeled.


**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Middle Asia, Caucasus, Western Asia. Tadzhikistan. Iran, Iraq.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Russia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Russia, Baical, Possolskoi; Turczaninov.

**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Rhizomes short. Culms erect or geniculately ascending, 15–30 cm long, 2–3 -node d. Ligule an eciliate membrane. Leaf-blades 1–4 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, oblong, 2–3 cm long, 1–1.5 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–4.5 mm long, falling entire.

**Glumes.** Glumes connate along margins below, 0.1 of their length connate, similar, exceeding apex of florets. Lower glume lanceolate, 4–4.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose, hairy on veins. Lower glume apex truncate. Upper glume lanceolate, 4–4.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose, hairy on veins. Upper glume apex truncate.

**Florets.** Fertile lemma oblong, 3.5–4 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins connate below. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, 9–10 mm long overall.


**TYPE** from Syria. T:<Type of Basionym>:


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, culms solitary or caespitose. Culms geniculately ascending, 4–40 cm long, 3–4-noded. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2–4 mm long, erose, truncate. Leaf-blades 0.7–12 cm long, 0.8–8 mm wide. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform, oblong or ovate, 0.8–4 cm long, 0.6–1.5 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 5–8.5 mm long, falling entire.

**Glumes.** Glumes connate along margins below, 0.33–0.5 of their length connate, similar, reaching apex of florets. Lower glume lanceolate, 5–8.5 mm long, 1 length of upper glume, membranous, 1-keeled, winged on keel, winged above, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose, hairy below. Lower glume apex acute. Upper glume apex acute. Upper glume primary vein ciliate. Upper glume surface pilose, hairy below. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 5–8.5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below, with 0.5 of their length connate. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 6–15 mm long overall, with twisted column. Palea absent or minute.


2n = 14 (2 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia.

**Region.** Northern Europe (*), Southeastern Europe.


### Alopecurus vaginatus


**TYPE** from Russia. Basionym or Replaced Name: *Polypogon vaginatus* Willd., *Ges. Naturf. Fr. Neue Schr.* 3: 44 (1801). T:<Type of Basionym>:


**Classification.** Subfamily Pooideae. Tribe: Poeae.
Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Rhizomes elongated. Butt sheaths glabrous, persistent and investing base of culm, with compacted dead sheaths. Culms erect, 18–30 cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5–2 mm long, truncate. Leaf-blades filiform, flat or convolute, 1–15 cm long, 1–2 mm wide. Leaf-blade surface scaberulous, rough adaxially, glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath. Panicle spiciform or glomerate, oblong or ovate or globose, 1.4–2.5 cm long, 0.7–1.3 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis with rounded ribs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–4.5 mm long, falling entire.

Glumes. Glumes connate along margins below, 0.1 of their length connate, similar, reaching apex of florets. Lower glume elliptic, 3–4.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume surface pilose. Upper glume elliptic, 3–4.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume apex acute, mucronate or awned, 1 -awned, awn 0.6–1.8 mm long.

Florets. Fertile lemma oblong, 3–4.5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma margins connate below. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 5–10.5 mm long overall, clearly exerted from spikelet, with twisted column. Palea 1 -veined, 1-keeled.


Region. Eastern Europe.


Illustrations (Books): S.A. Renvoize, The Grasses of Bahia, 1984 (138, Fig.47 as Panicum).

Illustrations (Journals): Ann. Missouri Bot. Gard. (88: 355, Fig.1 (2001)).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Serra da Chapada, Brazil.


Habit, Vegetative Morphology. Perennial, caespitose, clumped moderately. Rhizomes short, knotty, scaly. Culms 75–80 cm long, 6–9 -noded. Culm-internodes thin-walled, distally glabrous. Culm-nodes flush with internodes, purple, glabrous. Lateral branches lacking or sparse, arising from mid culm. Leaves cauline. Leaf-sheaths without keel, striately veined, glabrous on surface, outer margin glabrous or hairy. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades linear or lanceolate, 6–10 cm long, 3–8 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade margins scabrous. Leaf-blade apex attenuate, muticous or pungent.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Peduncle 2–4.5 cm long. Panicle contracted, lanceolate or oblong, 6.5–14.5 cm long, 1.5–3.5 cm wide. Primary panicle branches 2–8 -nate, whorled at most nodes. Panicle axis glabrous. Panicle branches glabrous, bearded in axils (1–3mm). Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, filiform, unequal, 1–3 mm long, ciliate, hairy at tip and at base, with 1–4 mm long hairs, tip discoid.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or oblong, dorsally compressed, 3–3.2 mm long, falling entire. Spikelet callus pilose. Spikelet callus hairs 1–1.5 mm long.
**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, firmer than fertile lemma. Upper glume oblong, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface hispid, hairy on veins. Upper glume awned, 1 -awned, awn 18–26 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, much thinner on margins, 3 -veined, with conspicuous midvein, ribbed, pubescent, acute. Fertile lemma absent. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1.8–2.1 mm long, purple. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, lanceolate or oblong, dorsally compressed, 1.8–1.9 mm long, light brown. Embryo 0.33 length of caryopsis. Hilum elliptic, 0.2 length of caryopsis.

**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Brazil. Brazil West Central.


**TYPE** from Brazil. **Basionym or Replaced Name:** Arthropogon scaber Pilg. & Kuhlm., Comm. Lin. Telegr., Bot. 67(11): 37–38, t. 2 (1922).


**Illustrations (Journals):** Ann. Missouri Bot. Gard. (88: 367, Fig.7 (2001) as var. scabrum).

**Derivation** (Clifford & Bostock 2007): L. rough or gritty to the touch. Plants with rough leaf-blades, spikelets or stems.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths thickened and forming a bulb. Culms 30–70 cm long. Culm-nodes glabrous. Ligule an eciliate membrane, 1 mm long. Leaf-blades linear or lanceolate, flat or conduplicate, 15–30 cm long, 10 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle open, 15–18 cm long. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, filiform.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6 mm long, 1 mm wide, falling entire. Spikelet callus pubescent. Spikelet callus hairs 0.15 length of spikelet.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, coriaceous, 3 -veined, scabrous, obtuse. Fertile lemma linear, membranous, without keel. Lemma apex obtuse. Palea absent or minute.


**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Western South America, Brazil. Bolivia. Brazil West Central.

Mato Grosso, Goiás.


**TYPE** from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Olivenca: Calderon, dos Santos & Oliveira 2444 (CEPEC holo, K).
Illustrations (Books): E.J.Judziewicz et al, American Bamboos (1999) (152, Fig. 65 & 153, Fig. 66).
Images: Plant Image Collection Smithsonian Institution;
Derivation (Clifford & Bostock 2007): L. auris, ear; -ula, diminutive; -ata, possessing. Leaf-blades rounded at the base or with auricles.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.
Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 2000–2500 cm long, 5–10 mm diam., woody. Culm-internodes terete, solid, 40–83 cm long, distally pubescent. Lateral branches dendroid. Bud complement 1. Branch complement many, in a clump, subtended by a bare patch above the node, with 1 branch dominant. Culm-sheaths present, deciduous but leaving a persistent girdle, glabrous or pubescent, auriculate, setose on shoulders. Culm-sheath ligule 0.5 mm high, ciliate. Culm-sheath blade lanceolate or ovate, erect, 7.5–19.2 cm long, pubescent. Leaves cauleine, 16 per branch. Leaf-sheath oral hairs setose. Leaf-sheath auricles falcate. Ligule a ciliolate membrane, 0.2–0.5 mm long, scarious. Collar with external ligule. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, oblong, 16–21 cm long, 15–30 mm wide. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, fasciculate, 10–20 cm long, with glumaceous subtending bracts, without axillary buds at base of spikelet, prophyllate below lateral spikelets. Fertile spikelets sessile.
Fertile Spikelets. Spikelets comprising 3–30 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 9–29 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, clavate.
Glumes. Glumes one the lower absent or obscure, persistent, shorter than spikelet, similar to fertile lemma in texture. Upper glume lanceolate, 5–7 mm long, 0.6–0.8 length of adjacent fertile lemma, chartaceous, without keels, 5 -veined. Upper glume surface hispidulous. Upper glume margins ciliate. Upper glume apex obtuse.
Florets. Fertile lemma lanceolate, 8–9 mm long, chartaceous, without keel, 5–6 -veined, more than 3-veined. Lemma surface puberulous. Lemma margins ciliolate. Lemma apex acuminate. Palea 1 length of lemma, chartaceous. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicles 3, 2 mm long, veined, ciliate. Anthers 2, 5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with fleshy pericarp, obvoid, 2 mm long. Endosperm farinose.

Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil Northeast.


Illustrations: None found.
Images: Plant Image Collection Smithsonian Institution.; E.J.Judziewicz, E.J., American Bamboos (1999);.
Derivation (Clifford & Bostock 2007): L. slender. Culms or inflorescences slender.
Classification. Subfamily Bambusoideae. Tribe: Bambuseae.
Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 600–800 cm long, 3–5 mm diam., woody. Culm-internodes terete, solid, 20–47 cm long, distally pubescent. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement many, in a clump, subtended by a bare patch above the node, with 1 branch dominant. Culm-sheaths present, deciduous but leaving a persistent girdle, pubescent, without auricles. Culm-sheath ligule 0.5 mm high, brown, ciliate. Culm-sheath blade lanceolate or ovate, erect, 2.7 cm long, pubescent. Leaves cauleine, 3–8 per branch. Leaf-sheath oral hairs scanty, 1 mm long. Ligule a ciliolate membrane, 0.5
mm long, scarious. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3 cm long, petiole glabrous. Leaf-blades deciduous at the ligule, linear or ovate, 4–8 cm long, 6–16 mm wide. Leaf-blade surface papillose, rough adaxially, glabrous. Leaf-blade margins ciliate. Leaf-blade apex acuminate, hairy.

**Inflorescence.** Synflorescence bractiferous, fasciculate, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets.

**Fertile Spikelets.** Spikelets comprising 10–27 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 160–270 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhabdilla internodes definite, clavate.

**Glumes.** Glumes several, 1–3 empty glumes, persistent, shorter than spikelet, similar to fertile lemma in texture. Upper glume lanceolate, 6 mm long, chartaceous, without keels.

**Florets.** Fertile lemma lanceolate or ovate, 5–6.5 mm long, chartaceous, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma surface glabrous, inner surface pubescent. Lemma margins ciliolate. Lemma apex acuminate. Palea 1 length of lemma, chartaceous, 1 -veined, without keels. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 1.3 mm long, membranous, ciliate. Anthers 2, 3.3 mm long. Stigmas 2. Ovary glabrous. Caryopsis with fleshy pericarp, obovoid, 16 mm long. Endosperm farinose.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Northeast.


**Illustrations:** None found.

**Images:** Plant Image Collection Smithsonian Institution;

**Derivation** (Clifford & Bostock 2007): *L. lanceus*, lance; *folium*, leaf. Leaf-blade lanceolate.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 600–800 cm long, 3–8 mm diam., woody. Culm-internodes terete, thick-walled, 30–55 cm long. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement many, in a clump, subtended by a bare patch above the node, with 1 branch dominant. Culm-sheaths present, deciduous but leaving a persistent girdle, pubescent, without auricles. Culm-sheath ligule 1 mm high. Culm-sheath blade lanceolate, erect, 5–8.4 cm long, pubescent. Leaves cauleine, 5–9 per branch. Leaf-sheaths hirsute, outer margin hairy. Ligule a ciliolate membrane, 0.2 mm long, scarious. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2 cm long, petiole pilose. Leaf-blades deciduous at the ligule, linear, 5–8 cm long, 3–7 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade apex acuminate.

**Inflorescence.** Synflorescence bractiferous, fasciculate, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets.

**Fertile Spikelets.** Spikelets comprising 6–30 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 150–370 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhabdilla internodes definite, clavate.

**Glumes.** Glumes several, 1–3 empty glumes, persistent, shorter than spikelet, similar to fertile lemma in texture. Upper glume lanceolate, 5.5–8 mm long, chartaceous, without keels.

**Florets.** Fertile lemma lanceolate or ovate, 5.2–6.2 mm long, chartaceous, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma surface puberulous. Lemma margins ciliolate. Lemma apex
Amelichloa ambiguLocuminate, mucronate. Palea 5.5–6 mm long, 1 length of lemma, chartaceous, without keels. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit**. Lodicules 3, 1.3–1.9 mm long, membranous, ciliate. Anthers 2, 3.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with fleshy pericarp, obovoid, 20 mm long. Endosperm farinose.

**Distribution (TDWG)**. Continent. South America.


Amelichloa ambiguLocuminate, mucronate. Palea 5.5–6 mm long, 1 length of lemma, chartaceous, without keels. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit**. Lodicules 3, 1.3–1.9 mm long, membranous, ciliate. Anthers 2, 3.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with fleshy pericarp, obovoid, 20 mm long. Endosperm farinose.

**Distribution (TDWG)**. Continent. South America.


Accepted by: W.D. Clayton & K. Harman, GrassBase (2008) and online (as Stipa).

**TYPE** from Argentina. Basionym or Replaced Name: Stipa ambiguLocuminate, mucronate. Palea 5.5–6 mm long, 1 length of lemma, chartaceous, without keels. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit**. Lodicules 3, 1.3–1.9 mm long, membranous, ciliate. Anthers 2, 3.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with fleshy pericarp, obovoid, 20 mm long. Endosperm farinose.

**Distribution (TDWG)**. Continent. South America.


Accepted by: W.D. Clayton & K. Harman, GrassBase (2008) and online (as Stipa).

**TYPE** from Argentina. Basionym or Replaced Name: Stipa ambiguLocuminate, mucronate. Palea 5.5–6 mm long, 1 length of lemma, chartaceous, without keels. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit**. Lodicules 3, 1.3–1.9 mm long, membranous, ciliate. Anthers 2, 3.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with fleshy pericarp, obovoid, 20 mm long. Endosperm farinose.

**Distribution (TDWG)**. Continent. South America.


Amelichloa brachyChalcedonic, mucronate. Palea 5.5–6 mm long, 1 length of lemma, chartaceous, without keels. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit**. Lodicules 3, 1.3–1.9 mm long, membranous, ciliate. Anthers 2, 3.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with fleshy pericarp, obovoid, 20 mm long. Endosperm farinose.

**Distribution (TDWG)**. Continent. South America.

Country /Province /State. Southern South America. Argentina Northeast, Argentina South, Argentina Northwest, Uruguay.


Accepted by: W.D. Clayton & K. Harman, GrassBase (2008) and online (as Stipa).


Derivation (Clifford & Bostock 2007): Gk. brachys, short; chaete, bristle. Awn of lemma shorter than that of related species.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–90 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an ecelliate membrane, 0.2–0.5 mm long, pilose on abaxial surface, truncate. Leaf-blades filiform, flat or convolute, 8–35 cm long, 0.5–3 mm wide, stiff. Leaf-blade surface scaberulous, rough adaxially or on both sides, glabrous. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex pungent.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4–0.5 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–8 mm long, 1 length of upper glume, hyaline, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex setaceously acuminate. Upper glume lanceolate, 6–8 mm long, 1.5–2 length of adjacent fertile lemma, hyaline, without keels, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear, subterete, 4–5.5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy on back. Lemma margins convolute, covering most of palea. Lemma apex attenuate, awned, 1 -awned. Principal lemma awn geniculate or bigeniculate, 10–18 mm long overall, with 6–12 mm long limb, with a straight or slightly twisted column. Column of lemma awn 2–4 mm long, glabrous. Palea 3–3.5 mm long, 2 -veined, without keels. Palea surface pilose, hairy on back (extending beyond tip).

Flower and Fruit. Lodicules 3. Anthers 3, 2–2.4 mm long, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, oblong, 2–3 mm long (x0.9–1mm). Hilum linear, 1 length of caryopsis.

Cleistogenes present, in upper sheaths and in lower sheaths.

Distribution (TDWG). Continent. Australasia, South America.

Country /Province /State. Australia (*). New South Wales. Southern South America. Argentina Northeast, Argentina South, Argentina Northwest, Chile Central, Uruguay.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online (as Stipa).

TYPe from Chile. Basionym or Replaced Name: Stipa brevipes E. Desv., Fl. Chil. 6: 282 (1854).


Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms 50–100 cm long, 1–2 mm diam., 4–5 -noded. Culm-nodes swollen, pallid or brown or purple, glabrous. Leaf-sheaths smooth, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.4–1 mm long. Leaf-
blades filiform, conduplicate, 15–30 cm long, 0.4–1 mm wide, stiff or firm. Leaf-blade surface ribbed. Leaf-blade apex muticous or pungent.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 11–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 1 mm long, pilose, acute. Floret callus hairs 2 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, much thinner on margins, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 11–15 mm long, membranous, with hyaline margins, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, suberete, 7–9.8 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose.Lemma margins convolute, covering most of palea. Lemma hairs 1–1.3 mm long. Lemma apex dentate, 2 -fid, with lobes 1 mm long, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 23–35 mm long overall, with twisted column. Middle segment of lemma awn 5–9 mm long. Column of lemma awn 4–10 mm long, pubescent, with 0.7–0.8 mm long hairs. Palea 5–7 mm long, without keels. Palea surface pilose. Palea apex ciliate.


**Caryopsis with adherent pericarp, fusiform, 6–7 mm long. Hilum linear.**

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Southern South America. Argentina South, Chile Central, Chile South. Mendoza. Chubut, Neuquén, Río Negro, Santa Cruz. Santiago. Aisen, Magellanes.


**Derivation** (Clifford & Bostock 2007): *L. cauda*, tail; *ata*, possessing.

**Classification.** Subfamily Pooidaeae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 55–100 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.3–0.5 mm long, pilose on abaxial surface, truncate. Leaf-blades straight or curved, filiform or linear, flat or involute or convolute, 25–70 cm long, 2–7 mm wide, firm. Leaf-blade surface scaberulous, rough adaxially, glabrous. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex pungent.
Inflorescence. Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle open, equilateral, 14–45 cm long, bearing many spikelets or few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–1 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–11 mm long, 1 length of upper glume, hyaline, without keels, 3 - veined. Lower glume surface scabrous, rough on veins, glabrous or pilose, hairy on veins. Lower glume margins eciliate or ciliate. Lower glume apex setaceously acuminate. Upper glume lanceolate, 5–11 mm long, 1.5–2 length of adjacent fertile lemma, hyaline, without keels, 3 - veined. Upper glume surface scabrous, rough on veins, glabrous or pilose, hairy on veins. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear, subterete, 4–6 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy between veins. Lemma margins convolute, covering most of palea. Lemma apex attenuate, surmounted by a ring of hairs, with this appendage 0.7–1 mm long, awned, 1 -awned. Principal lemma awn flexuous or bigeniculate, 12–25 mm long overall, with 6–15 mm long limb, with a straight or slightly twisted column. Column of lemma awn 2–4 mm long, glabrous. Palea 2 -veined, without keels. Palea surface pubescent, hairy on back (not exceeding tip).

Flower and Fruit. Lodicules 3. Anthers 3, 3–4 mm long, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, obovoid, 3 mm long (x1–1.4mm). Hilum linear, 1 length of caryopsis.

Cleistogenes present, in lower sheaths.

Region. Northern Europe (*)
Southern South America. Argentina Northwest, Argentina Northeast, Argentina South, Chile Central, Uruguay.


Accepted by: W.D Clayton & K.Harman, GrassBase (2008) and online (as Stipa).


Derivation (Clifford & Bostock 2007): L. hidden. The inflorescence is enclosed or partially enclosed in the upper leaf-sheath.


Habit, Vegetative Morphology. Perennial. Culms erect, 50–80 cm long, 1–2 -noded. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1 mm long, pilose on abaxial surface. Leaf-blades flat or conduplicate or involute, 10–20 cm long, 1–2 mm wide, light green. Leaf-blade apex hardened.

Inflorescence. Inflorescence a panicle, terminal or terminal and axillary, embraced at base by subtending leaf or enclosed. Axillary inflorescences different from terminal (cleistogamous), enclosed.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent (white), acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 8 mm long, chartaceous, without keels, 3 -veined. Upper glume surface asperulous. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, suberete, 6 mm long, coriaceous, pallid, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma margins convolute, covering most of palea. Lemma hairs white. Lemma apex surmounted by a ring of hairs, with this appendage 1 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 11–18 mm long overall, with twisted column. Middle segment of lemma awn 3–5 mm long. Column of lemma awn 3–5 mm long. Palea 2 -awned, without keels.


**Distribution (TDWG).** Continent: Europe. Region: Northern Europe, Middle Europe, Southwestern Europe, Eastern Europe.


**Illustrations (Books):** C.E.Hubbard, *Grasses* (1968) (286).

**Derivation** (Clifford & Bostock 2007): From one of the countries bordering the Baltic sea.

**Classification.** Subfamily Pooidae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms erect or geniculately ascending, robust, 70–150 cm long. Leaf-sheaths without keel, smooth. Ligule an eliculate membrane, 10–25 mm long, acute. Leaf-blades flat or involute, 50–100 cm long, 3–7 mm wide, stiff. Leaf-blade surface ribbed (above), scaberulous (above), glabrous or puberulous (above). Leaf-blade apex attenuate, pungent.

**Inflorescence.** Inflorescence a panicle. Peduncle distinct, smooth or scaberulous above. Panicle spiciform, lanceolate, tapering above, 13–25 cm long, 1.7–3 cm wide. Primary panicle branches 3–7 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–4 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterately compressed, 9–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 5–7 length of lemma.


**Florets.** Fertile lemma lanceolate, 7–9 mm long, cartilagineous, keeled, 3–7 -veined, more than 3-veined. Lemma surface asperulous. Lemma apex dentate, 2 -fid, awned. Principal lemma awn subapical, straight, 1–2 mm long overall. Palea 2–4 -veined. Palea keels scaberulous.

**Flower and Fruit.** Anthers 3. 4–4.5 mm long, indehiscent.

**Distribution (TDWG).** Continent: Europe.

**Region.** Northern Europe, Middle Europe, Southwestern Europe, Eastern Europe.
**Country /Province /State.**: Denmark, GB Aliens (Ryves et al), Norway, Sweden. : Germany, Netherlands, Poland. : France. Baltic States.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 2–15 cm long. Leaf-sheaths inflated, reticulately veined. Ligule an eciliate membrane or absent, 0–0.3 mm long. Leaf-blades 3–8 cm long, 1–2 mm wide. Leaf-blade margins cartilaginous, scaberulous.

**Inflorescence.** Inflorescence a panicle, comprising 6–15 fertile spikelets, shorter than basal leaves, deciduous as a whole, subtended by a spatheole, embraced at base by subtending leaf. Spatheole lanceolate, herbaceous (reticulately veined). Peduncle disarticulating, disarticulating below uppermost sheaths. Panicle capitate, globose, 0.8–1 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1–3 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–8 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes similar, shorter than spikelet. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, winged on keel, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume lanceolate, 0.5–0.9 length of adjacent fertile lemma, membranous, 1-keeled, winged on keel, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, mucronate.

**Florets.** Fertile lemma elliptic, 5–7 mm long, membranous, without keel, 5(-7) -veined, more than 3-veined. Lemma apex entire or dentate, 2 -fid, obtuse, muticious or mucronate.

**Flower and Fruit.** Lodicules absent. Anthers 3, 2.7–4 mm long. Stigmas 2, terminally exserted, pubescent. Ovary glabrous. Caryopsis with adherent pericarp, ellipsoid, 1.8–2 mm long, apex rostrate (0.25–0.33 length of grain). Hilum punctiform.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Northern Africa. Morocco.


**TYPE** from Palestine. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: *Boissier s.n.*, Palestine (G).


**Derivation** (Clifford & Bostock 2007): from Palestine.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms 0.5–4 cm long. Leaf-sheaths loose or inflated. Ligule an eciliate membrane, 1.5 mm long, lacerate. Leaf-blades 1.7–7(-9) cm long, 0.5–1.5 mm wide. Leaf-blade margins scaberulous.

**Inflorescence.** Inflorescence a panicle, shorter than basal leaves. Panicle capitate, ovate or globose. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 4–14 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the
upper sterile. Spikelets oblong, laterally compressed, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 3–5 mm long, 1 length of upper glume, scariosous, much thinner on margins, 1-keeled, winged on keel, winged narrowly, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 3–5 mm long, 0.75–1 length of adjacent fertile lemma, scariosous, with hyaline margins, 1-keeled, winged on keel, 1 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

**Florets.** Fertile florets recurved at tip. Fertile lemma ovate, 4–5 mm long, chartaceous or coriaceous, much thinner on margins, yellow, without keel, 5 -veined, more than 3-veined. Lemma surface smooth or scabrous, glabrous or pilose. Lemma apex acute, mucronate. Palea 1 length of lemma, 2 -veined. Palea keels scaberulous. Palea apex truncate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules absent. Anthers 3, 0.6–0.8 mm long. Ovary beaked. Caryopsis with adherent pericarp, ellipsoid, trigonous, 1.4 mm long, apex rostrate. Embryo 0.33 length of caryopsis. Hilum punctiform.

**Distribution (TDWG).** Continent Europe, Africa, Temperate Asia. Region Southwestern Europe. Country /Province /State : Spain, Northern Africa, Algeria, Egypt, Libya, Morocco, Tunisia, Caucasus, Western Asia, Arabian Peninsula, Iran, Iraq, Palestine, Israel & Jordan, Turkey, Kuwait, Saudi Arabia.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE from Algeria.** Basionym or Replaced Name: *Dactylis pungens* Schreb., *Beschreibung der Graser* 2: 42, t. 27, f. 1. (1772). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Algeria: Coll?.

**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L. *pungo*, prick. Leaf-blades sharp-pointed.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms geniculately ascending or decumbent, 1–25 cm long. Leaf-sheaths loose or inflated. Ligule an eciliate membrane, 1–3 mm long, entire or lacerate. Leaf-blades 1–5 cm long, 1–5 mm wide. Leaf-blade margins scaberulous. Leaf-blade apex obtuse, apiculate. Inflorescence. Inflorescence a panicle, aerial. Panicle capitulate, globose, 0.5–1.5 cm long. Spikelets solitary. Fertile spikelets sessile.

**Sterile Spikelets.** Basal sterile spikelets well-developed, 1–2 in number, barren, ovate, 4 mm long, smaller than fertile. Basal sterile spikelets glumes membranous.

**Fertile Spikelets.** Spikelets comprising 7–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 4 mm long, 1 length of upper glume, scariosous, much thinner on margins, without keels, 5 -veined. Lower glume apex obtuse or acute. Upper glume ovate, 4 mm long, 0.9 length of adjacent fertile lemma, scariosous, with hyaline margins, without keels, 5 -veined. Upper glume apex obtuse or acute.

**Florets.** Fertile lemma ovate, 4.5 mm long, chartaceous, much thinner on margins, without keel, 5–9 -veined, more than 3-veined. Lemma surface pubescent, with capitate hairs. Lemma apex emarginate, awned, 1 -awned. Principal lemma awn from a sinus, 0.5–1 mm long overall. Palea 0.9 length of lemma, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules absent. Anthers 3, 2.5–4 mm long. Ovary beaked. Caryopsis with adherent pericarp, oblong, plano-convex, 1.3–1.4 mm long, apex rostrate. Embryo 0.4 length of caryopsis, projecting below grain. Hilum punctiform.

**Distribution (TDWG).** Continent Europe (*), Africa.

**Ammophila arenaria** (L.) Link. *Hort. Berol. 1: 105 (1827).**


**Derivation (Clifford & Bostock 2007):** L. *arena*, sandy place; -aria, pertaining to. Of sandy habitats.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms erect or geniculately ascending, 50–120 cm long. Ligule an e ciliate membrane, 10–30 mm long. Leaf-blades convolute, 20–60 cm long, 2–6 mm wide, stiff. Leaf-blade surface ribbed, pubescent, hairy adaxially. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear or oblong, tapering above, 7–22 cm long. 1–2.5 cm wide. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 10–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.25–0.33 length of lemma (3–5mm).

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–15 mm long, 0.9–1 length of upper glume, chartaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 10–16 mm long, 1.2–1.3 length of adjacent fertile lemma, chartaceous, 1-keeled, 3 -veined. Upper glume surface asperulous. Upper glume apex acute.

**Fertile Spikelets.** Anthers 3, 4–7 mm long. Ovary glabrous. Caryopsis with adherent pericarp, obovoid. Hilum linear, 0.8 length of caryopsis. 2n = 28 (2 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Australasia (*), North America, South America, Antarctica.

**Region.** Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.
**Country /Province /State.** : Denmark, Finland, Great Britain, Ireland, Sweden. : Belgium, Germany, Netherlands, Switzerland. : Baleares, Corsica, France, Portugal, Sardinia, Spain. : Albania, Greece, Italy, Crete, Romania, Sicily, Turkey Europe, Yugoslavia. Estonia, Latvia, Lithuania, Baltic States, Central European Russia, Northwest European Russia. **Northern Africa, Southern Africa** (*). Algeria, Egypt, Libya, Morocco. Western Cape, Eastern Cape. **Western Asia, Arabian Peninsula.** Kuwait. **Australia** (*). **New Zealand** (*). New South Wales (*), South Australia (*), Tasmania (*), Victoria (*), Western Australia (*), Lord Howe-Norfolk Is (*). Chatham Is, New Zealand North Island, New Zealand South Island, Stewart Is. Fiji (*, not persisting). Hawaii (*). **Western Canada, Northwest USA, Southwestern USA.** British Columbia. Oregon, Washington, California. **Southern South America.** Argentina South, Chile Central, Chile South. **Subantarctic islands.** Falkland Is (Malvinas).


**TYPE** from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: USA, Milford: *Bissel*.


**Classification.** Subfamily Pooideae. Tribe: Poaeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms erect or geniculately ascending, 70–100 cm long. Ligule an eciliate membrane, 1–3 mm long, scarious. Leaf-blades convolute, 20–60 cm long, 2–6 mm wide, stiff. Leaf-blade surface ribbed, scaberulous. Leaf-blade apex filiform.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.2 length of lemma (2mm).

**Glumes.** Glumes persistent, similar, exceeding apex of florets or reaching apex of florets. Lower glume lanceolate, 10–15 mm long, 1 length of upper glume, chartaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 10–15 mm long, 1–1.3 length of adjacent fertile lemma, chartaceous, 1-keeled, 3 -veined. Upper glume surface asperulous. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 10–12 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex acute. Palea 0.9 length of lemma, 2–4 -veined. Palea keels approximate. Rachilla extension 0.25–0.33 length of fertile floret, pilose, hairy throughout but longer above.

**Flower and Fruit.** Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Europe, North America.


_Illustrations_: None found.

_Derivation_ (Clifford & Bostock 2007): L. _-ensis_, denoting origin. From Champlain, New York State, USA.


_Habit, Vegetative Morphology_. Perennial, caespitose. Rhizomes elongated. Culms erect or geniculately ascending, 70–100 cm long. Ligule an e ciliate membrane, 1–3 mm long, scarious. Leaf-blades convolute, 20–60 cm long, 2–6 mm wide. Leaf-blade surface ribbed, scaberulous.


_Fertile Spikelets_. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 10–11.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded.

_Glumes_. Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 9–10.5 mm long, 0.9 length of upper glume, chartaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Upper glume apex acute. Upper glume lanceolate, 10–11.5 mm long, 1.1 length of adjacent fertile lemma, chartaceous, 1-keeled, 3 -veined. Upper glume surface asperulous. Upper glume apex acute.

_Florets_. Fertile lemma lanceolate, 9–10.5 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma apex acute. Palea 1 length of lemma, 2–4 -veined. Palea keels approximate. Rhachilla extension 0.25–0.33 length of fertile floret, pilose, hairy throughout but longer above.


_Country /Province /State_. Northeast USA. Vermont.


_Illustrations (Books)_: S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 130).

_Derivation_ (Clifford & Bostock 2007): Gk. _aktinos_, ray; _thrix_, hair. With hairs radiating from the orifice of the leaf-sheath.

_Classification_. Subfamily Bambusoideae. Tribe: Arundinarieae.


**Fertile Spikelets.** Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 40–60 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5–7 mm long, eventually visible between lemmas.

**Glumes.** Glumes two, persistent, similar, shorter than spikelet. Lower glume lanceolate, 5 mm long, chartaceous, without keels. Lower glume apex acuminate. Upper glume apex acuminata. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 11 mm long, 2.5 mm wide, chartaceous, keeled, lightly keeled, 7 -veined, more than 3-veined. Lemma midvein scaberulous. Lemma apex acuminate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicles 3. Anthers 3, 6 mm long. Stigmas 3. Caryopsis with adherent pericarp, apex unappendaged.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. Hainan.


**Accepted by:** U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk *an-,* without; L. *hispidus,* rough. Culm leaf-sheaths glabrous at the base.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China North-Central.


**Illustrations:** None found.

**Images:** R.Darke, *The Encylopaedia of Grasses for Liveable Landscapes* (2007); (as *A. breviligulata*).

**Derivation** (Clifford & Bostock 2007): L. *brevis,* short; *ligula,* little tongue; -atus, possessing. Ligule short.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose, clumped densely. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, pendulous at the tip, 300–600 cm long, 5–20 mm diam., woody, 25–34 -noded. Culm-internodes terete, thick-walled, 18–20 cm long, striate, distally glabrous. Lateral branches dendroid. Bud complement 3. Branch complement several, in an irregular line, with subequal branches or 1 branch dominant or 2 branches dominant. Culm-sheaths present, tardily deciduous, 12–27 cm long, 5 times as long as wide, coriaceous, glabrous or hispid, with grey hairs or yellow hairs, without auricles, glabrous on shoulders. Culm-sheath ligule 1–2 mm high, ciliolate. Culm-sheath blade linear or lanceolate, reflexed, 0.8–9 cm long, 1–7 mm wide, glabrous on surface. Leaves 2–9 per branch. Leaf-sheaths 2.2–3.8 cm long, pilose, outer margin hairy. Leaf-sheath oral hairs setose, 2.5–6 mm long. Ligule a ciliolate membrane, 1 mm long, purple. Leaf-blade base with a brief petiolo-like connection to sheath, petiole 0.1–0.2 cm long. Leaf-blades deciduous at the ligule, lanceolate, 4–10.5 cm long, 6.5–10 mm wide, fleshy. Leaf-blade venation with 4–8 secondary veins, with obscure cross veins. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins scaberulous. Leaf-blade apex attenuate. Flowering specimens unknown.

**Distribution (TDWG).** Continent. Temperate Asia.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo. Rhizomes elongated, leptomorph. Butt sheaths absent. Culms erect, inclined at the tip, 100–150 cm long, 4–5 mm diam., woody. Culm-internodes terete, 8–18 cm long, distally pubescent. Lateral branches dendroid. Bud complement 1. Branch complement several. Culm-sheaths present, persistent, pubescent, with white hairs, hairy on margins, auriculate, setose on shoulders, shoulders with straight hairs, shoulders with 10 mm long hairs. Culm-sheath ligule 7–10 mm high, ciliate. Culm-sheath blade lanceolate, reflexed. Leaves 2–3 per branch. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, spreading and deciduous, 5–7 mm long. Leaf-sheath auricles falcate. Ligule a ciliolate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate or oblong, 7–20 cm long, 12–30 mm wide, indurate, mid-green and glaucous, discolorous with last colour beneath. Leaf-blade venation with 8–14 secondary veins. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central. Guizhou.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *hirsutus*, hairy; *-issima*, most. Plant in whole or in part very hairy.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central. Guizhou.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 128).


Inflorescence. Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 12–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2–3 mm long.


Florets. Fertile lemma lanceolate, 8–9 mm long, chartaceous, 7 -veined, more than 3-veined. Lemma apex acuminate. Palea apex dentate, 2-fid. Apical sterile florets resembling fertile though underdeveloped.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 131).


Inflorescence. Inflorescence composed of racemes, terminal and axillary, subtended by bracts. Spathiie glumaceous, 1.5 cm long. Racemes 1, single, 3–4 cm long, bearing 3–4 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 3–5 fertile spikelets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–15 mm long, 8–10 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes flattened, 1–1.5 mm long.
Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 5–7 mm long, herbaceous, without keels. Lower glume apex acuminate. Upper glume lanceolate, 5–7 mm long, herbaceous, without keels. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 9–11 mm long, herbaceous, without keel, 7–9 -veined, more than 3-veined. Lemma apex acute. Palea 10–12 mm long, 10 -veined. Palea apex truncate. Apical sterile florets resembling fertile though underdeveloped.


Chongqing.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 129).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Mainning Xian, Sichuan Province, China.


Sichuan, Yunnan.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 131).

Derivation (Clifford & Bostock 2007): GK, micros, small; phyllon, leaf. Leaf-blades short.


auricles absent. Ligule a ciliolate membrane, 1 mm long, lacerate, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.15 cm long. Leaf-blades deciduous at the ligule, lanceolate, 3–9 cm long, 4–11 mm wide, fleshy. Leaf-blade venation with 4 secondary veins, without cross veins. Leaf-blade surface glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate. Flowering specimens unknown.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** China South Central.

**Sichuan.**


**Illustrations (Books):** C-C Hsu, *Taiwan Grasses* (1975) (743, Pl. 1500 as Chimonobambusa & Arthrostylidium).

**Derivation (Clifford & Bostock 2007):** L. -ensis, denoting origin. From Naibun Taiwan.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets, terminal and axillary, subtended by bracts (and clustered at nodes). Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1–6 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 20–40 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume oblong, 3–5 mm long, chartaceous, without keels. Lower glume apex acute. Upper glume oblong, 3–5 mm long. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 10–12 mm long, 3–4 mm wide, chartaceous, without keel, 7–11 -veined, more than 3-veined. Lemma apex acute. Palea 7–11 mm long, 11 -veined. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, ciliate. Anthers 3, 4 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** Eastern Asia. Taiwan.


Derivation (Clifford & Bostock 2007): *L. patella*, smallish; -aris, pertaining to. Small dishes are made from the culm internodes.


Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1–2.5 cm long, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophylact of lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes suppressed between florets.

Glumes. Glumes several, 1–2 empty glumes, persistent, similar, shorter than spikelet. Upper glume ovate, chartaceous, without keels. Upper glume apex acuminate.

Florets. Fertile lemma orbicular, 7 mm long, chartaceous, without keel, 9–11 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins ciliate. Lemma apex acute. Palea chartaceous, 4 -veined, 2-keeled but the uppermost without keels. Palea keels ciliate. Palea surface pubescent.

Flower and Fruit. Lodicles absent or 1 or 2, ciliate. Anthers 6, purple, anther tip with extended connective and pubescent. Filaments united in a tube. Stigmas 3, plumose. Ovary umonube, pubescent on apex. Caryopsis with adherent pericarp.


Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 132).


Habit. Vegetative Morphology. Perennial, woody bamboo. Rhizomes elongated, leptomorph. Butt sheaths absent. Culms erect, inclined at the tip or nodding at the tip, 300–600 cm long, 5–15 mm diam., woody, 22–30 -noded. Culm-internodes terete, thin-walled, 22–55 cm long, dark green, striate, antrorsely scabrous. Culm-nodes swollen, glabrous. Lateral branches dendroid. Bud complement 1. Branch complement several, with 1 branch dominant. Culm-sheaths present, tardily deciduous, 10–18 cm long, 3–4 times as long as wide, chartaceous, green or purple, concolorous or distinctly mottled with last colour, glabrous or puberulous, hairy on margins, truncate at apex, without auricles. Culm-sheath ligule 1 mm high, entire or ciliolate. Culm-sheath blade linear or lanceolate, narrower than sheath, reflexed, 0.4–4.5 cm long, 2–10 mm wide, glabrous on surface, acuminate. Leaves 4–10 per branch. Leaf-sheaths 3–8 cm long, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, spreading. Leaf-sheath auricles
falcate. Ligule a ciliolate membrane. Leaf-blade base cuneate, with a brief petiole-like connection to sheath, petiole 0.3–0.4 cm long. Leaf-blades deciduous at the ligule, lanceolate, 8–18 cm long, 10–22 mm wide, fleshy. Leaf-blade venation with 8–12 secondary veins, without cross veins. Leaf-blade margins scaberulous. Leaf-blade apex acuminate, pungent. Flowering specimens unknown.

**Distribution (TDWG). Continent.** Temperate Asia.
**Country /Province /State.** China. China South Central.
Sichuan, Yunnan.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 128).

**Derivation** (Clifford & Bostock 2007): L. *scando*, climb up, scrambling habit.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Distribution (TDWG). Continent.** Temperate Asia.
**Country /Province /State.** China. China South Central.
Guizhou.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *-ensis*, denoting origin. From Yongsang, Yunnan Province, China.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Distribution (TDWG). Continent.** Temperate Asia.
**Country /Province /State.** China. China South Central.
Sichuan, Yunnan.


**Basionym or Replaced Name:** Arundo mauritanica Poir., *Voy. Barb.* 2: 104 (1789).

**Recent Synonyms:** Deyeuxia arundinacea P. Beauv., in syn., *Ess. Agrostogr.*: 160, t.15, f.11a-d (1812).


**Derivation (Clifford & Bostock 2007):** L. -ica, belonging to. From Mauritania.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms 100–200 cm long. Culm-internodes solid. Ligule an eciliate membrane, 8–20 mm long, lacerate. Leaf-blades flat or convolute, 30–100 cm long, 4–7 mm wide, coriaceous, stiff. Leaf-blade apex attenuate, filiform.


**Fertile Spikelets.** Spikelets comprising 2–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, villous, hairy above, with 2 mm long hairs. Floret callus bearded. Floret callus hairs 0.2 length of lemma.

**Glumes.** Glumes persistent, similar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 6–9 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex attenuate. Upper glume lanceolate, 10–12 mm long, 0.8–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 5 -veined. Upper glume apex attenuate.

**Florets.** Fertile lemma lanceolate, 9–15 mm long, coriaceous, keeled, 5 -veined, more than 3-veined. Lemma midvein ciliate, hairy below. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, 1–2 mm long overall. Palea linear, 0.75 length of lemma, coriaceous, 2 -veined. Palea keels scaberulous. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, lanceolate, 2–3 mm long, membranous, ciliate, acute. Anthers 3, 5 mm long. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, linear, sulcate on hilar side, 5–6 mm long, hairy at apex. Embryo 0.25 length of caryopsis. Hilum linear, 1 length of caryopsis. 2n = 48 (FNA).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, North America (*). Region. Southwestern Europe, Southeastern Europe.

**Country /Province /State.** : Baleares, Corsica, France, Portugal, Sardinia, Spain. : Greece, Italy, Sicily. **Northern Africa.** Algeria, Libya, Morocco, Tunisia. **Western Asia, Eastern Asia.** Iran. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. Japan. **Southwestern USA.** California.


Habit, Vegetative Morphology. Perennial. Culms erect, 60–120 cm long, 1–3 mm diam., 2–4 -noded, not swollen at the base or swollen at the base, forming an ovoid corm. Culm-internodes terete, ridged, smooth or scaberulous. Culm-nodes glabrous. Leaf-sheaths ribbed, smooth. Ligule an eciliate membrane, 4.5–12.5 mm long, acute. Leaf-blades flat or involute, 15–32 cm long, 2.5–4 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially, smooth or scaberulous, rough abaxially, pubescent, hairy adaxially.


Fertile Spikelets. Spikelets comprising 3–7 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–18 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5.1–6.8 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3–5 -veined. Lower glume apex acute or acuminate. Upper glume elliptic, 6.4–9.2 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 5–7 -veined. Upper glume apex acute, muticous or mucronate.

Florets. Fertile lemma elliptic, 6–7.8 mm long, cartilaginous, without keel, 7 -veined, more than 3-veined. Lemma surface smooth or scabrous. Lemma apex dentate, 4 -fid, with lobes 2–3 mm long, awned, 5 -awned. Principal lemma awn dorsal, arising 0.55–0.6 way up back of lemma, geniculate, flat below, 14.5–17.5 mm long overall, with 9–12 mm long limb, with twisted column. Column of lemma awn 5–7.5 mm long, scabrous. Lateral lemma awns present, arising on apex of lobes, 0.5–0.8 mm long, shorter than principal. Palea 0.65–0.7 length of lemma. Palea keels ciliate. Palea surface smooth or papillose. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, 1.4–1.9 mm long, membranous, glabrous, acute. Anthers 3, 2.3–2.4 mm long, eventually exserted or retained within floret. Ovary glabrous. Caryopsis with adherent pericarp, 1.7–2.2 mm long, light brown, glabrous. Embryo 0.2–0.3 length of caryopsis. Hilum linear, 0.3–0.35 length of caryopsis.


Derivation (Clifford & Bostock 2007): L. *fluito*, float. Leaves or rhizomes floating.


Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 40–75 cm long, 0.5–1.5 mm diam., 3–5 -noded. Culm-internodes terete, ridged, smooth or scaberulous. Culm-nodes glabrous. Leaf-sheaths ribbed, antrorsely scabrous. Ligule an eciliate membrane, 6.5–12 mm long, acute. Leaf-blades flat or involute, 10–25 cm long, 2–4.5 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially, scabrous.

Fertile Spikelets. Spikelets comprising 6–10 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 9–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2.7–3.7 mm long, 0.8 length of upper glume, chartaceous, much thinner on margins, 1-keeled, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume lanceolate, 3.5–4.5 mm long, 0.9 length of adjacent fertile lemma, chartaceous, with membranous margins, 1-keeled, 3–5 -veined. Upper glume apex acute.

Florets. Fertile lemma elliptic, 3.7–5 mm long, cartilaginous, without keel, 7 -veined, more than 3-veined. Lemma surface scabrous, glabrous or hispidulous. Lemma apex dentate, 2 -fid, with lobes 0.3–0.6 mm long, awned, 1-awned. Principal lemma awn dorsal, arising 0.45–0.6 way up back of lemma, straight, flat below, 11–17 mm long overall, without a column. Palea 0.3–0.75 length of lemma. Palea keels ciliate. Palea surface smooth. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, 0.9–1.23 mm long, membranous, glabrous, acute. Anthers 3, 1.5–1.7 mm long, eventually exserted or retained within floret. Ovary glabrous. Caryopsis with adherent pericarp, 1.3–1.7 mm long, light brown, glabrous. Embryo 0.1–0.2 length of caryopsis. Hilum linear, 0.25–0.3 length of caryopsis.


Derivation (Clifford & Bostock 2007): Gk. makros, large; rhis, nose. Lemma apex drawn out.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths distinctly ribbed, glabrous. Culms erect, 50–100 cm long, 1–2.5 mm diam., 2–4 -noded. Culm-internodes terete or elliptical in section, ridged, smooth or scaberulous. Culm-nodes glabrous. Leaf-sheaths ribbed, smooth or scaberulous. Ligule an eciliate membrane, 6–17 mm long, acute. Leaf-blades flat or involute, 15–25 cm long, 1.5–4 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially, smooth to scabrous, pubescent, hairy adaxially.


Fertile Spikelets. Spikelets comprising 4–5 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–17 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.9–6.3 mm long, 0.9 length of upper glume, membranous, much thinner on margins, 1-keeled, 3–4 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 4.2–7 mm long, 0.9–1.2
length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 5 -veined. Upper glume surface smooth or papillose. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 3.5–7.9 mm long, cartilaginous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface papillose, rough below. Lemma apex dentate, 4 -fid, with outer lobes shorter, with lobes 0.5–1.15 mm long, awned, 1 -awned. Principal lemma awn dorsal, arising 0.4–0.5 way up back of lemma, geniculate, 10–19 mm long overall, with a straight or slightly twisted column. Column of lemma awn 3.5–6.8 mm long, scabrous. Palea 0.66–0.95 length of lemma. Palea keels ciliate. Palea surface papillose. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, 1–2.2 mm long, membranous, glabrous, acute. Anthers 3, 2.7–3 mm long, eventually exserted or retained within floret. Ovary glabrous. Caryopsis with adherent pericarp, 1.5–1.95 mm long, light brown, glabrous. Embryo 0.15–0.2 length of caryopsis. Hilum linear, 0.3–0.4 length of caryopsis.

**Distribution (TDWG).** Continent: Australasia. Country /Province /State: Australia. New South Wales, South Australia, Tasmania, Victoria, Western Australia. Southern. Western Slopes, Western Plains.


**Classification.** Subfamily Pooideae. Tribe: Poaeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or elongated. Butt sheaths distinctly ribbed, glabrous. Culms erect, 80–150 cm long, 1–2.5 mm diam., 2–4 -noded. Culm-internodes terete or elliptical in section, ridged. Culm-nodes glabrous. Leaf-sheaths ribbed, smooth or scaberulous. Ligule an eciliate membrane, 6.5–8 mm long, acute. Leaf-blades flat or involute, 15–37 cm long, 2–4 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially, smooth to scabrous, pubescent, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 2–5 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–14 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.8–6.3 mm long, 0.6–0.8 length of upper glume, membranous, much thinner on margins, 1-keeled, 3–5 -veined. Lower glume apex acute. Upper glume lanceolate, 6.4–7.5 mm long, 1.1 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 5–7 -veined. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 5.9–8.4 mm long, cartilaginous, without keel, 5–7 -veined, more than 3-veined. Lemma midvein ciliolate. Lemma surface scabrous or papillose. Lemma apex dentate, 2(–4) -fid, with outer lobes shorter, with lobes 0.26–0.36 mm long, awned, 1 -awned. Principal lemma awn dorsal,
arising 0.66–0.75 way up back of lemma, geniculate, 13.8–25.5 mm long overall, with 9–17.5 mm long limb, with twisted column. Column of lemma awn 4.8–6.5 mm long, scabrous, hirtellous. Palea 0.8–0.9 length of lemma. Palea keels ciliate. Palea surface papillose. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, 1.3–2.3 mm long, membranous, glabrous, acute. Anthers 3, 1.3–2.3 mm long, eventually exserted or retained within floret. Ovary glabrous. Caryopsis with adherent pericarp, 2–3 mm long, light brown, glabrous. Embryo 0.1–0.2 length of caryopsis. Hilum linear, 0.35–0.45 length of caryopsis.

**Distribution (TDWG).** Continent: Europe (*), Australasia. Region: Northern Europe (*).

**Country /Province /State:** : GB Aliens (Ryves et al). Australia. New South Wales, A.C.T., South Australia, Tasmania, Victoria.

Southern. Coast, Tablelands, Western Slopes, Western Plains.

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**Images:** D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

**Derivation** (Clifford & Bostock 2007): L. *nervus*, nerve; -osa, abundance. With conspicuous nerves in the glumes or lemmas.

**Classification.** Subfamily Pooideae. Tribe: Pooeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths distinctly ribbed, glabrous. Culms erect, 60–125 cm long, 1–3 mm diam., 2–5-noded, without nodal roots or rooting from lower nodes. Culm-internodes terete or elliptical in section, ridged, smooth or scaberulous. Culm-nodes glabrous. Leaf-sheaths ribbed, smooth or scaberulous. Ligule an eciliate membrane, 10–20 mm long, acute. Leaf-blades flat or involute, 15–30 cm long, 1.5–3.5 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially, scabrous, rough adaxially or on both sides.

**Inflorescence.** Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, 20–40 cm long. Primary panicle branches 2–4-nate, 7–14 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 10–20 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 4–6 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–16 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.4–5 mm long, 0.8–1 length of upper glume, membranous, 1-keeled, 1–3–(5) -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume lanceolate, 4.5–6.2 mm long, 0.8–0.9 length of adjacent fertile lemma, membranous, 1-keeled, 3–5 -veined. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 5–7.2 mm long, cartilaginous, without keel, 5–7 -veined, more than 3-veined. Lemma surface scabrous. Lemma apex dentate, 2–4 -fid, with outer lobes shorter, with lobes 0.3–0.65 mm long, awned, 1 -awned. Principal lemma awn dorsal, arising 0.45–0.6 way up back of lemma, geniculate, 12–22 mm long overall, with 7–15 mm long limb, with twisted column. Column of lemma awn 4–8.5 mm long, scabrous. Palea 0.75–0.95 length of lemma. Palea keels ciliate. Palea surface smooth or papillose. Apical sterile florets resembling fertile though underdeveloped.
Flower and Fruit. Lodicules 2, 0.95–1.3 mm long, membranous, glabrous, obtuse or acute. Anthers 3, 2.2–3 mm long, eventually exserted or retained within floret. Ovary glabrous. Caryopsis with adherent pericarp, 1.36–2.15 mm long, light brown, glabrous. Embryo 0.16–0.3 length of caryopsis. Hilum linear, 0.25–0.5 length of caryopsis.

Country /Province /State. Australia. New South Wales, A.C.T., South Australia, Victoria, Western Australia.
Eremean, South-West. Southern. Coast, Tablelands, Western Slopes, Western Plains.


Derivation (Clifford & Bostock 2007): Gk pithos, large earthenware winw-jar; gaster, belly. At maturity the lemma is completely swollen.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths distinctly ribbed, glabrous. Culms erect, 50–100 cm long, 1–2 mm diam., 2–3 -noded, not swollen at the base or swollen at the base, forming an ovoid corm. Culm-internodes terete or elliptical in section, ridged. Culm-nodes glabrous. Leaf-sheaths ribbed, smooth. Ligule an eciliate membrane, 2–5 mm long, acute. Leaf-blades flat or involute, 10–20 cm long, 1.5–5 mm wide. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough adaxially.


Fertile Spikelets. Spikelets comprising 2–6 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.6–5.3 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 4.7–7.3 mm long, 0.8–1 length of adjacent fertile lemma, membranous, 1-keeled, 5–7 -veined. Upper glume apex acute.

Florets. Fertile lemma elliptic, 5.6–7.5 mm long, cartilaginous, without keel, 7 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes shorter, with lobes 0.3–0.65 mm long, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, geniculate, flat below, 9–16 mm long overall, with 6–11 mm long limb, with twisted column. Column of lemma awn 3–5 mm long, scabrous. Palea 0.55–0.7 length of lemma. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, 1.3–1.75 mm long, membranous, glabrous, acute. Anthers 3, 0.6–1.5 mm long, retained within floret. Ovary glabrous. Caryopsis with adherent pericarp, 1.6–2.1 mm long, light brown, glabrous. Embryo 0.25–0.3 length of caryopsis. Hilum linear, 0.4–0.5 length of caryopsis.

Tablelands, Western Slopes.


**Derivation** (Clifford & Bostock 2007): *L. quatuor*, four; *dens*, tooth; *-ulus*, diminutive. The lemma is bilobed and each lobe two-toothed.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths thickened and forming a bulb. Culms erect, 40–135 cm long. Leaf-sheaths longer than adjacent culm internode, smooth or scaberulous. Ligule an eciliate membrane, 4–12 mm long. Leaf-blades 8–30 cm long, 1–5 mm wide. Leaf-blade surface scabrous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear or oblong, 10–35 cm long. Primary panicle branches ascending or spreading, 3–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 2–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes glabrous.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 2–4 mm long, 0.66–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 3–5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 3–5 mm long, cartilaginous, without keel, 7 -veined, more than 3-veined. Lemma surface scabrous. Lemma apex dentate, 2 -fid, with lateral lobes bidentate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.75–0.85 way up back of lemma, geniculate, 2–6 mm long overall, with twisted column. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 3. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex. Hilum linear.

**Distribution (TDWG).** Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil South. Argentina Northeast, Uruguay.


**Derivation** (Clifford & Bostock 2007): *L. reflexed*. Spikelets with spreading or reflexed awns.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths distinctly ribbed, glabrous or sparsely hairy. Culms erect, 80–150 cm long, 1–1.5 mm diam., 3–5 -noded. Culm-internodes terete or
elliptical in section, ridged, smooth or scaberulous. Culm-nodes glabrous. Leaf-sheaths ribbed, smooth or scaberulous. Ligule an ecelliate membrane, 7–11 mm long, acute. Leaf-blades flat or involute, 15–30 cm long, 2–3 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially.


**Fertile Spikelets.** Spikelets comprising 4–6 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–11 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.3–5.5 mm long, 0.8–1 length of upper glume, membranous, much thinner above, much thinner on margins, 1-keeled, 1–3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent or distinct. Lower glume apex acute or acuminate. Upper glume elliptic, 4–5.4 mm long, 1 length of adjacent fertile lemma, membranous, much thinner above, with hyaline margins, 1-keeled, 3–5 -veined. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 4–5.2 mm long, cartilaginous, without keel, 5–7 -veined, more than 3-veined. Lemma surface hispid. Lemma apex dentate, 4 -fid, with simple equal lobes or with outer lobes shorter, with lobes 0.43–1 mm long, awned, 1-awned. Principal lemma awn dorsal, arising 0.5–0.66 way up back of lemma, geniculate, 9–18 mm long overall, with a straight or slightly twisted column. Column of lemma awn 3.3–3.5 mm long, hirtellous. Palea 0.7–0.95 length of lemma. Palea keels eciliate or ciliolate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, 0.8–1.3 mm long, membranous, glabrous or ciliate, acute. Anthers 3, 1.2–2 mm long, eventually exserted. Ovary glabrous. Caryopsis with adherent pericarp, 1.8–2.3 mm long, light brown, glabrous. Embryo 0.1–0.3 length of caryopsis. Hilum linear, 0.2–0.35 length of caryopsis.

**Distribution (TDWG).** Continent Australasia. Country /Province /State Australia. South Australia, Tasmania, Victoria.


T: Type of Basionym: *fide* TROPICOS and Kew Synonomy Database: HT: *J.D. Hooker*, Hooker mis. 1835, Chile: Mendosa (LE-TRIN-1937.01; IT: US-869748 (fragm. ex LE)).


**Illustrations (Journals):** Ruizia (13:150, Fig 16c-d (1993)).

**Derivation** (Clifford & Bostock 2007): L. *scaber*, rough; *valva*, leaf of a folding door. The lemmas and/or glumes are densely hispid.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Butt sheaths thickened and forming a bulb. Culms erect, 40–100 cm long. Ligule an ecelliate membrane, 6–12 mm long, lacerate. Leaf-blades 2–5 mm wide. Leaf-blade surface smooth or scabrous.

Fertile Spikelets. Spikelets comprising 3–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 14–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2 mm long, pilose. Floret callus pubescent, disarticulating obliquely.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3–5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume lanceolate, 4–7 mm long, 0.5–1 length of adjacent fertile lemma, membranous, 1-keeled, 5–7 -veined. Upper glume apex acute.

Florets. Fertile lemma elliptic, 7 mm long, cartilaginous, without keel, 7–9 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 13–15 mm long overall, with twisted column. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 2–2.7 mm long, eventually exserted or retained within floret. Ovary pubescent on apex. Caryopsis with adherent pericarp, ellipsoid, 2.5–3.5 mm long, hairy at apex. Hilum linear.


Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 40–70 cm long, 0.8–2 mm diam., 1–4 -noded. Culm-internodes terete or elliptical in section, ridged, smooth. Culm-nodes glabrous. Leaf-sheaths ribbed, smooth or scaberulous. Ligule an eciliate membrane, 5–11 mm long, acute or acuminate. Leaf-blades 8–17 cm long, 1–4 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially, scabrous.


Fertile Spikelets. Spikelets comprising 5–6 fertile florets, with a barren rhachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–19 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.7–4.5 mm long, 0.75–0.9 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute or acuminate. Upper glume lanceolate, 4.3–5.8 mm long, 0.7 length of adjacent fertile lemma, membranous, 1-keeled, 3–5 -veined. Upper glume apex acute.
**Florets.** Fertile lemma elliptic, 6.2–8.2 mm long, cartilaginous, without keel, 7 -veined, more than 3-veined. Lemma surface scabrous. Lemma apex dentate, 4 -fid, with outer lobes shorter, with lobes 0.5–1 mm long, awned, 1 -awned. Principal lemma awn dorsal, arising 0.6–0.66 way up back of lemma, straight, flat below, 14–26 mm long overall, without a column. Palea 0.75–0.9 length of lemma. Palea keels ciliate. Palea surface smooth. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, 1–1.6 mm long, membranous, glabrous, acute. Anthers 3, 2.2–3.3 mm long, eventually exserted or retained within floret. Ovary glabrous. Caryopsis with adherent pericarp, 2.3–2.7 mm long, light brown, glabrous. Embryo 0.25–0.35 length of caryopsis. Hilum linear, 0.3–0.4 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. New South Wales, South Australia, Tasmania, Victoria.

Southern. Tablelands.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–100 cm long, 1–3 mm diam., 4–5 -noded. Culm-internodes terete or elliptical in section, ridged, smooth. Culm-nodes glabrous. Leaf-sheaths ribbed, smooth or scaberulous. Ligule an eciliate membrane, 9–12 mm long, acute. Leaf-blades 15–35 cm long, 3–4 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially, scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with a barren rhachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–11 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.2–3.4 mm long, 0.9 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 3.6–4 mm long, 0.7 length of adjacent fertile lemma, membranous, 1-keeled, 5 -veined. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 5–5.5 mm long, cartilaginous, without keel, 7 -veined, more than 3-veined. Lemma surface scabrous, rough on veins. Lemma apex dentate, 4 -fid, with simple equal lobes or with outer lobes shorter, with lobes 0.5–1 mm long, awned, 5 -awned. Principal lemma awn dorsal, arising 0.5–0.55 way up back of lemma, geniculate, flat below, 10–12 mm long overall, with 6–7.5 mm long limb, with twisted column. Column of lemma awn 4–5 mm long, scabrous. Lateral lemma awns present, arising on apex of lobes, 0.5 mm long, shorter than principal. Palea 0.8 length of lemma. Palea keels ciliate. Palea surface papillose. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, 0.98–1.12 mm long, membranous, glabrous, acute. Anthers 3, 1.7–1.8 mm long, eventually exserted. Ovary glabrous. Caryopsis with adherent pericarp, 1.9 mm long, dark brown, glabrous. Embryo 0.35 length of caryopsis. Hilum linear, 0.3–0.35 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia. South-West.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, 5–10 cm long, 1–1.5 cm wide. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pilose, hairy above. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 2–2.3 mm long, 0.7–0.8 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 2.5–3 mm long, 0.6–0.7 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 4–4.5 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface papillose or tuberculate. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 8–12 mm long overall, with twisted column. Palea keels winged, narrowly winged, ciliolate, adnored above. Rhachilla extension 0.75 length of fertile floret. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 1–3, 0.3–0.5 mm long. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex. Hilum linear.

**Distribution (TDWG).** Continent. Australasia.

Country /Province /State. Australia. Queensland.

Inland.


**Derivation** (Clifford & Bostock 2007): Gk. amphi-, both; karpos, fruit. Inflorescences with both aerial and subterranean spikelets.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 30–80 cm long. Leaf-sheaths hispid. Ligule a fringe of hairs. Leaf-blades linear or lanceolate, 10–15 cm long, 5–15 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate.
**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, 3–20 cm long, contracted about primary branches. Primary panicle branches 1.5–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acuminate, 7–8 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 0.9 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, 7–8 mm long, indurate, much thinner on margins, without keel, 5 -veined, more than 3-veined. Lemma margins flat. Lemma apex apiculate. Palea indurate.

**Flower and Fruit.** Cleistogenes present, underground.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Northeast USA and Southeastern USA. New Jersey. Florida, North Carolina, South Carolina.

**Amphicarpum muhlenbergianum** (Schult.) Hitchcock. *Bartonia* 14, 34 (1932).


**TYPE** from USA. Basionym or Replaced Name: *Milium muhlenbergianum* Schult., *Mant.* 2: 178 (1824). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: USA: South Carolina or Florida [no loc. cited].


**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Boivinellinae.

**Habit, Vegetative Morphology.** Perennial. Cataphylls evident. Rhizomes elongated. Culms erect or geniculately ascending, 10–70 cm long, rooting from lower nodes. Lateral branches sparse. Leaves caudine. Leaf-sheaths ribbed, hispid. Ligule a fringe of hairs. Leaf-blade base simple or broadly rounded. Leaf-blades lanceolate, (0.5–)3–10 cm long, 5–10 mm wide, herbaceous to coriaceous. Leaf-blade surface smooth or scaberulous, glabrous. Leaf-blade margins cartilaginous.

**Inflorescence.** Inflorescence a panicle or composed of racemes. Panicle open, lanceolate, 10–25 cm long, contracted about primary branches. Primary panicle branches distant, 1 -nate, indistinct the panicle almost racemose or simple, 1.5–15 cm long. Panicle branches scaberulous. Racemes 1–4, single or borne along a central axis, 1.5–15 cm long. Central inflorescence axis 5–10 cm long. Spikelets ascending or appressed, solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1–8 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acuminate, 6–7 mm long, falling entire.

**Glumes.** Glumes dissimilar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1 mm long, 0.1–0.2 length of spikelet, membranous or scarious, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 0.9–1 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, without keels, 5 -veined, acute. Fertile lemma elliptic, 5.5–6 mm long, coriaceous or indurate, without keel, 5 -veined, more than 3-veined. Lemma lateral veins transversely connected at apex. Lemma margins involute. Lemma apex apiculate. Palea elliptic, 1 length of lemma, indurate, 2 -veined. Palea surface papillose. Palea apex acuminate.
Flower and Fruit. Lodicules 2, cuneate, 0.5 mm long, fleshy. Anthers 3, 4 mm long. Stigmas 2. Ovary glabrous. Cleistogenes present, underground.


Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Gk. amphi-, double; pogon, beard. Both lemmas have several awns arising from incisions at their apices.


Inflorescence. Inflorescence a panicle. Panicle capitate, ovate, 1–1.5 cm long. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–7 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface villous. Lower glume apex acuminate. Upper glume lanceolate, 5–7 mm long, 1.4–1.8 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 3.5–4 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface pilose. Lemma margins involute. Lemma apex lobed, 3 -fid (or the laterals with a subsidiary outer lobe), incised 0.4–0.5 of lemma length, acuminate. Palea oblong, 1 length of lemma, coriaceous, 2 -veined, without keels. Palea surface pilose. Palea apex lobed, 4 -fid, acuminate.

Flower and Fruit. Anthers 3, 2–2.5 mm long. Caryopsis with free soft pericarp.


Amphipogon avenaceus R. Br. Prod. 175 (1810).


TYPE from Australia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: R. Brown 6229, no date, Australia: Western Australia, New Holland (BM; IT: US-75457 (fragm. ex BM)).


Derivation (Clifford & Bostock 2007): L. -acea, resembling. With inflorescences and/or spikelets similar to those of Avena.

Habit, Vegetative Morphology. Perennial. Rhizomes short, scaly. Culms erect or geniculately ascending, 20–35 cm long, 3–5-noded. Ligule a fringe of hairs. Leaf-blades filiform, involute, 5–15 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong, 4 cm long, 1 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Panicle axis pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear, 1–3 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2.5 mm long, pubescent, acute. Floret callus hairs 0.2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–13 mm long, 1.2 length of upper glume, scarios, much thinner on margins, without keels, 3-veined. Lower glume apex setaceously acuminate. Upper glume lanceolate, 10–12 mm long, 1.2 length of adjacent fertile lemma, scarios, with membranous margins, without keels, 3-veined. Upper glume apex setaceously acuminate.

Florets. Fertile lemma oblong, 8–9 mm long, coriaceous, without keel, 3-veined, 0–3-veined. Lemma surface pubescent, hairy all along. Lemma margins involute. Lemma apex lobed, 3-fid, with margins splitting into evanescent supplementary lobes, incised 0.5–0.6 of lemma length, awned, 3-awned. Principal lemma awn 4 mm long overall. Lateral lemma awns present, arising on apex of lobes, 4 mm long, subequal to principal. Palea oblong, 2-awned, without keels. Palea surface pubescent, hairy on back, hairy above. Palea apex lobed, 2-fid, acuminate, awned.

Flower and Fruit. Anthers 3, 5 mm long. Caryopsis with free soft pericarp.


Country /Province /State. Australia. Western Australia.


Derivation (Clifford & Bostock 2007): L. carex, reed-grass; -inus, belonging to. Similar to Carex.

fertile lemma, chartaceous, without keels, 3 -veined. Upper glume surface scabrous. Upper glume apex acute.

**Florets.** Fertile lemma oblong, gibbous, 5–6 mm long, coriaceous, much thinner on margins, without keel, 3 -veined, 0–3 -veined. Lemma midvein pubescent, hairy below (in 2 lines). Lemma surface glabrous or pubescent. Lemma margins involute. Lemma apex lobed, 3 -fid, with margins splitting into evanescent supplementary lobes, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn 2.5–3 mm long overall, limb glabrous or ciliate. Lateral lemma awns present, arising on apex of lobes, 2.5–3 mm long, subequal to principal, glabrous or ciliolate. Palea oblong, 2 -veined, without keels. Palea apex lobed, 2 -fid, acuminate, awned, awns glabrous or hairy.

**Flower and Fruit.** Anthers 3, 3 mm long. Caryopsis with free soft pericarp.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Lord Howe-Norfolk Is, New South Wales, Northern Territory, Queensland, South Australia, Victoria, Western Australia. Kimberley, Eremeane, South-West. Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern. North, Central, South East, Inland. Western Slopes, Western Plains.


**Type** from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *R. Brown 6228*, no date, Australia: Western Australia: New Holland (BM; IT: K, US-75456 (fragm. ex BM)).


**Derivation** (Clifford & Bostock 2007): L. weak. Culms decumbent often much branched at the base.

**Classification.** Subfamily Arundinoideae. Tribe: Amphipogoneae.

**Habit, Vegetative Morphology.** Perennial. Culms geniculately ascending or decumbent, 10–20 cm long, 3–5 -noded. Culm-nodes glabrous. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blades filiform, involute, 1–12 cm long, 1–2 mm wide, stiff. Leaf-blade surface smooth or scaberulous, rough abaxially. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence a panicle. Peduncle pubescent above. Panicle capitate, oblong, 1–2 cm long. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 4.5 mm long, 1.3 length of upper glume, membranous, much thinner on margins, without keels, 3 -veined. Lower glume margins ciliolate. Lower glume apex dentate, 3 -fid. Upper glume ovate, 3.5 mm long, 0.3–0.5 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 3 -veined. Upper glume margins ciliolate. Upper glume apex dentate, 3 -fid.

**Florets.** Fertile lemma lanceolate, 7–10 mm long, cartilaginous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface scabrous. Lemma margins involute. Lemma apex lobed, 3 -fid, incised 0.6–0.7 of lemma length, setaceously acuminate. Palea linear, 0.9 length of lemma, cartilaginous, 2 -veined. Palea keels scaberulous. Palea apex lobed, 2 -fid, acuminate, awned.

**Flower and Fruit.** Anthers 3. Caryopsis with free soft pericarp.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia. South-West.


TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: R. Brown 6225, no date, Australia: Western Australia: New Holland (BM; IT: K, US-75455 (fragm. ex BM)).


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Butt sheaths glabrous or sparsely hairy. Culms erect, 25–30 cm long, 4–5 -noded. Ligule a fringe of hairs, 0.5–2 mm long. Leaf-blades flexuous, convolute, 10–20 cm long, 2–3 mm wide, stiff. Leaf-blade surface ribbed, scaberulous, rough abaxially, pubescent, hairy adaxially. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle capitate, ovate or globose, 1–1.5 cm long. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Spikelets solitary. Fertile spikelets sessile.

Sterile Spikelets. Basal sterile spikelets rudimentary.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus broad, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–6 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface pilose, with tubercle-based hairs. Lower glume apex setaceous acuminately. Upper glume lanceolate, 5–6 mm long, 1.2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume surface pilose, with tubercle-based hairs. Upper glume apex setaceous acuminately.

Florets. Fertile lemma oblong, 4–5 mm long, coriaceous, without keel, 7 -veined, 0–3 -veined. Lemma surface pubescent, hairy below, hairy between veins. Lemma margins involute. Lemma apex lobed, 3 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn 5–6 mm long overall. Lateral lemma awns present, arising on apex of lobes, 5–6 mm long, shorter than principal. Palea oblong, 2 -veined, without keels. Palea surface pubescent, hairy on flanks. Palea apex lobed, 2 -fid, acuminate, awned.

Flower and Fruit. Anthers 3. Caryopsis with free soft pericarp.


Derivation (Clifford & Bostock 2007): L. *sericeus*, silken; -eaI, indicating resemblance. Densely invested in part or totally with long hairs.


Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 3.5–6 cm long, 0.7–2 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Sterile Spikelets. Basal sterile spikelets absent.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.6–0.7 mm long, acute.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 6.5 mm long, 1 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume surface scabrous, glabrous or hirsute, hairy above. Lower glume apex obtuse. Upper glume ovate, 6.5 mm long, chartaceous, without keels. Upper glume surface scabrous, glabrous or hirsute, hairy above. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, 6–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface pubescent (body) or plumose (lobes). Lemma margins involute. Lemma apex lobed, 3 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn 2.5–4.5 mm long overall. Lateral lemma awns present, arising on apex of lobes, 2.5–4.5 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3, 4.5 mm long.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia, Northern Territory, Queensland. Eremean. Victoria R & Barkly Tableland, Central Australia. Central, Inland.


**TYPE** from Australia. **Basionym or Replaced Name:** *Diplopogon setaceus* R.Br., *Prodromus Florae Novae Hollandiae* 176 (1810). 


**Derivation** (Clifford & Bostock 2007): *L.* *seta*, bristle; *-acea*, indicating resemblance. With bristle-like leaf-blades.

**Classification.** Subfamily Arundinoideae. Tribe: Amphipogoneae.

**Habit, Vegetative Morphology.** Perennial. Culms 30–60 cm long. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 15–25 cm long, 1 mm wide. Leaf-blade surface ribbed.

**Inflorescence.** Inflorescence a panicle. Panicle capitate, globose, 1–2.5 cm long. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Spikelets solitary. Fertile spikelets pedicelled. Pedicels absent.

**Sterile Spikelets.** Basal sterile spikelets absent or rudimentary, 0–3 in number.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 7 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, awned, 1 -awned, awn 2.5–3 mm long. Upper glume elliptic, 7 mm long, 1.4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 3–5 mm long.

**Florets.** Fertile lemma elliptic, 5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn geniculate, 4–5 mm long overall, with twisted column. Lateral lemma awns present, 2–2.5 mm long, shorter than principal. Palea 1 length of lemma, 2 -awned, without keels. Palea apex dentate, 2 -fid, awned, awns 2 mm long.

**Flower and Fruit.** Anthers 3, 2–3.5 mm long. Caryopsis with tardily free pericarp.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia. South-West.
Amphipogon strictus R. Br. Prod. 1: 175 (1810).


Inflorescence. Inflorescence a panicle. Panicle spiciform or capitulate, oblong, 1–2 cm long, 0.5 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Spikelets. Basal sterile spikelets absent or rudimentary, 0–3 in number.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent, disarticulating obliquely.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 4–6 mm long, 0.8 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 5–7 mm long, 0.8 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 6–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein pubescent, hairy below (in 2 lines). Lemma surface pubescent, hairy below, hairy on veins. Lemma margins involute. Lemma apex lobed, 3 -fid, with lanceolate lobes, incised 0.66 of lemma length, acute, awned, 3 -awned. Principal lemma awn 2–3.5 mm long overall, limb ciliate, glabrescent towards tip. Lateral lemma awns present, arising on apex of lobes, 2–3.5 mm long, subequal to principal, ciliate. Palea oblong, 0.9 length of lemma, 2 -awned, without keels. Palea apex dentate, 2 -fid, acuminate, awned, awns 2 mm long, awns hairy.

Floret and Fruit. Anthers 3, 3.5–4 mm long. Caryopsis with free soft pericarp.


Country /Province /State. Australia. New South Wales, Northern Territory, Queensland, South Australia, Victoria, Western Australia.


Amphipogon turbinatus R. Br. Prod. 1: 175 (1810).


Inflorescence. Inflorescence a panicle. Panicle capitate, obovate, 1.5 cm long, 1.5 cm wide. Primary panicle branches accrescent to a central axis, with evident branchlets on axis. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5 mm long.

Sterile Spikelets. Basal sterile spikelets rudimentary.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–3 mm long, pubescent, pungent. Floret callus hairs 0.2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–10 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface pilose, hairy above. Lower glume apex acuminate, awned, 1 -awned, awn 4–6 mm long. Upper glume lanceolate, 8–10 mm long, 1.2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume surface pilose, hairy above. Upper glume apex acuminate, awned, 1 -awned, awn 1–2 mm long.

Florets. Fertile lemma oblong, 6–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface pubescent, hairy all along. Lemma margins involute. Lemma apex lobed, 3 -fid, with margins splitting into evanescent supplementary lobes, incised 0.3–0.6 of lemma length, awned, 3 -awned. Principal lemma awn 6–8 mm long overall. Lateral lemma awns present, arising on apex of lobes, 6–8 mm long, subequal to principal. Palea oblong, 2 -veined, without keels. Palea surface pubescent, hairy on flanks. Palea apex lobed, 2 -fid, acuminate, awned, awns 6–8 mm long.

Flower and Fruit. Anthers 3. Caryopsis with free soft pericarp, obovoid, 2.5 mm long.

Country /Province /State. Australia. Western Australia.


TYPE from Sierra Leone. Basionym or Replaced Name: Andropogon afzelianus Rendle, J. Bot. 31: 357 (1893). T:<Type of Basionym>; fide TROPICOS and Kew Synonomy Database: In Sierra Leone, and designated Andropogon 2 in 1792–1794, Afzelius s.n. .

Illustrations (Books): H.Jacques-Felix, Les Graminees d'Afrique tropicale (1962) (307, Fig. 245 as Pobeguinea arrecta).

Illustrations (Journals): Hooker's Icones Plantarum (t.3090 (1922) as A. arrecta).


Inflorescence. Synflorescence compound, paniculate, 25–45 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, enclosed. Spatheole linear, 2–3 cm long, scarious. Peduncle pubescent above. Racemes 1, single, 1.5–2 cm long, bearing few fertile spikelets, bearing 2 fertile spikelets on each. Rachis fragile at the nodes, ciliate on margins. Spikelet packing lax. Rachis internodes filiform, 4–5 mm long. Rachis internode tip oblique. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas or male, linear to lanceolate, 6–9 mm long, longer than fertile, separately deciduous. Companion sterile spikelet callus oblong, 2-toothed. Companion sterile spikelet glumes coriaceous, 7–9 -veined, glabrous, acuminate, muticous or mucronate. Companion sterile spikelet lemmas 2, enclosed by glumes.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, suberete, 5–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus linear, 1.5–2.5 mm long, pilose, base pungent, attached obliquely. Spikelet callus hairs white.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma linear, 4–6 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.3–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 25–40 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** *n = 10* (1 ref TROPICOS).

**Distribution (TDWG).** Continent: Africa.

**Country /Province /State.** West Tropical Africa, West-Central Tropical Africa. Benin, Burkina, Ghana, Guinea-Bissau, Guinea, Ivory Coast, Mali, Nigeria, Senegal, Sierre Leone, Togo. Congo, DRC.


**TYPE** from Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Dalaba: *Adames 390* (K holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *bis*, twice; *geniculata*, kneed. Awn of lemma bent in two places.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Anthistiriinae.

**Habit, Vegetative Morphology.** Annual. Culms 30–60 cm long. Ligule a ciliolate membrane, 1–2 mm long, truncate or acute. Leaf-blades 8–30 cm long, 1–2 mm wide. Leaf-blade surface scaberulous. Leaf-blade margins scaberulous.

**Inflorescence.** Synflorescence compound, paniculate, 15–25 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, exserted. Spathole linear, 1.5–2.5 cm long, scarious. Peduncle 2–3 cm long, scaberulous above. Racemes 1, single, 1 cm long, bearing few fertile spikelets, bearing 2–4 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Spikelet packing lax. Rhachis internodes filiform, 2 mm long. Rhachis internode tip oblique. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, ciliate.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels or well-developed, male, lanceolate, 5 mm long, as long as fertile, separately deciduous. Companion sterile spikelet callus cuneate, 0.5 mm long, obtuse. Companion sterile spikelet glumes coriaceous, glabrous, setaceously acuminate, muticous. Companion sterile spikelet lemmas 2, enclosed by glumes, 3 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus square or oblong, 0.2 mm long, pilose, base obtuse, attached obliquely. Spikelet callus hairs dark brown.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma, shiny. Lower glume oblong, 1 length of spikelet, coriaceous, dark brown, without keels, 7 -veined. Lower glume lateral veins obscure. Lower glume surface asperulous, rough above. Lower glume apex dentate, 2 -fid. Upper glume oblong, without keels, 3 -veined. Upper glume apex entire, awned, 1 -awned, awn 3.5–6 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3 mm long, hyaline, 2 -veined, ciliate on margins. Fertile lemma linear, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -
awned. Principal lemma awn from a sinus, bigeniculate, 14–22 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, cuneate, 0.2 mm long, fleshy, truncate. Anthers 3, 1.5–1.8 mm long.

**Distribution (TDWG).** Continent: Africa.

**Country /Province /State.** West Tropical Africa. Guinea, Sierre Leone.


**TYPE** from Guinea. T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: Kindia: Jacques-Felix 351d*.

**Illustrations:** None found.


**Habit, Vegetative Morphology.** Annual. Culms 100 cm long. Ligule a ciliolate membrane.

**Inflorescence.** Synflorescence compound, scanty, 10–30 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, enclosed. Spatheole lanceolate, 4.5–5.5 cm long, scarious, purple. Racemes 1, single, 3 cm long, bearing few fertile spikelets, bearing 2 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Spikelet packing lax. Rhachis internodes filiform. Rhachis internode tip oblique. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 5 mm long, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 15–25 mm long, longer than fertile, separately deciduous. Companion sterile spikelet callus oblong, 1 mm long, 2-toothed or emarginate. Companion sterile spikelet glumes coriaceous, glabrous, setaceously acuminate, awned, one glume awned, with 1–3 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 10–13 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus linear, curved, 3–4 mm long, pubescent, base pungent, attached obliquely. Spikelet callus hairs white.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, dark brown, without keels, 6–7 -veined. Lower glume lateral veins obscure. Lower glume apex entire, truncate. Upper glume oblong, coriaceous, without keels. Upper glume apex entire, awned, 1 -awned, aawn 7–14 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma oblong, 4.5 mm long, membranous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.4–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 50–70 mm long overall, with twisted column. Column of lemma awn 20–22 mm long, glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: Africa.

**Country /Province /State.** West Tropical Africa. Guinea.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. relating to a funeral. Lemma-awn black.


**Habit, Vegetative Morphology.** Annual, caespitose. Culms 60–100 cm long. Ligule an eciliate membrane, 1–1.3 mm long. Leaf-blades 4–10 cm long, 1–3 mm wide. Leaf-blade apex acuminate.

**Inflorescence.** Synflorescence compound, linear, 10–40 cm long.
Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, subtended by a spatheole, enclosed. Spatheole linear, 2–3 cm long, scarious. Spikelets in threes. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 2 in the cluster. Pedicels present, filiform, 2.5 mm long, ciliate, with red hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 10–11 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus linear, 2 mm long, pubescent, base pungent, attached obliquely. Spikelet callus hairs red.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 0.9 length of spikelet, coriaceous, dark brown, without keels, 6–7 -veined. Lower glume lateral veins obscure. Lower glume surface puberulous, hairy above. Lower glume apex entire, emarginate. Upper glume oblong, coriaceous, without keels. Upper glume apex entire, acute, muticous or mucronate, 1 -awned, awn 8–15 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma linear, 4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 100–120 mm long overall, with twisted column (black). Column of lemma awn 75–90 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

Country /Province /State. West Tropical Africa. Guinea.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.
Illustrations: None found.
Habit, Vegetative Morphology. Perennial. Culms 60–90 cm long. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 6–15 cm long, 2–4 mm wide, flaccid. Leaf-blade surface pubescent.
Inflorescence. Synflorescence compound, scanty, 10–30 cm long.
Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, exserted. Spatheole linear, 2–3 cm long, scarious. Peduncle 3–5 cm long, pubescent above. Racemes 1, single, 1.8–2 cm long, bearing few fertile spikelets, bearing 2–4 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Spikelet packing lax. Rhachis internodes filiform, 4–5 mm long. Rhachis internode tip oblique. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 4–5 mm long, ciliate.
Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 5–6.5 mm long, shorter than fertile, separately deciduous. Companion sterile spikelet callus oblong or cuneate, 0.7–1 mm long, 2-toothed or emarginate. Companion sterile spikelet glumes chartaceous, 9 -veined, glabrous, acuminate, mucronate or awned, with 0.5–1.5 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.
Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, 6–7.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1.5–2.5 mm long, pubescent, base acute, attached obliquely.
Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of fertile lemma, hyaline, 2 -veined, ciliate on margins, obtuse. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 3 mm long.


Country /Province /State. West-Central Tropical Africa. Congo, Gabon, DRC.


Illustrations (Books): H.Jacques-Felix, Les Graminees d’Afrique tropicale (1962) (309, Fig. 247 as A. longifolia).

Derivation (Clifford & Bostock 2007): Gk. leptos, narrow; kome, hair of the head. Pedicels of stalked spikelets hairy.


Habit, Vegetative Morphology. Perennial. Culms erect, 100–150 cm long. Ligule a ciliolate membrane. Leaf-blades 15–30 cm long, 2–6 mm wide.

Inflorescence. Synflorescence compound, paniculate. 30–60 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 1.5–2 cm long, scarious. Racemes 1, single, 0.8–1.2 cm long, bearing few fertile spikelets, bearing 3–5 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Spikelet packing lax. Rhachis internodes filiform, 2–6 mm long. Rhachis internode tip oblique. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, ciliate.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels or well-developed, containing empty lemmas or male, linear to lanceolate, as long as fertile, separately deciduous. Companion sterile spikelet callus cuneate, obtuse. Companion sterile spikelet glumes chartaceous, 7–9 -veined, glabrous, acuminate. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, subterete, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached obliquely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma linear, 4–6 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.3–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–16 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

TYPE from Togo. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Aledjo: Mathey & Scholz 390 (B holo).

Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 80–100 cm long. Leaf-sheaths longer than adjacent culm internode, striately veined, glabrous on surface. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades straight or curved, conduplicate, 1–2 mm wide. Leaf-blade surface scabrous, glabrous, hairless except near base. Leaf-blade margins scaberulous. Leaf-blade apex filiform.

Inflorescence. Synflorescence compound, paniculate, 25–30 cm long, lax.


Sterile Spikelets. Companion sterile spikelets represented by barren pedicels or well-developed (2 spikelets per raceme), male, linear, 8–9.2 mm long, longer than fertile, separately deciduous. Companion sterile spikelet callus cuneate, obtuse. Companion sterile spikelet glumes coriaceous, 9 -veined, pilose, acuminate. Companion sterile spikelet lemma 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, subterete, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus 0.8 mm long, pilose, base obtuse, attached obliquely.


Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 3.8–4.5 mm long, hyaline, 2 -veined, obscurely veined, ciliolate on margins. Fertile lemma linear, 3.5–3.8 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–16 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Lodicules 2, oblong, 0.5 mm long, truncate.


Country/Province/State. West Tropical Africa. Togo.


Illustrations (Journals): Hooker's Icones Plantarum (t.3091 (1922) as Monium).

Derivation (Clifford & Bostock 2007): Gk. makros, large; chaete, bristle. Lemmas long-awned.


Habit, Vegetative Morphology. Annual. Culms erect, 30–60 cm long. Ligule a ciliolate membrane. Leaf-blades 2.5–5 cm long, 0.5–1 mm wide.

Inflorescence. Synflorescence compound, linear, 10–20 cm long.

Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, subtended by a spatheole, enclosed. Spatheole linear, 1.8–2.5 cm long, scarious. Spikelets in threes. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 2 in the cluster. Pedicels present, filiform, 0.2–0.4 mm long, glabrous.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, subterete, 6–7 mm long, falling entire,
deciduous with accessory branch structures. Spikelet callus linear, 1.5 mm long, bearded, base pungent, attached obliquely. Spikelet callus hairs red.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma, shiny. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, keel-less except near apex, 6–7 -veined. Lower glume lateral veins obscure. Lower glume apex dentate, 2 -fid. Upper glume oblong, without keels, 1–3 -veined. Upper glume apex dentate, 2 -fid, muticous or mucronate, 1 -awned, aawn 2–5 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 2–3 mm long, hyaline, 0 -veined, without midvein, without lateral veins, ciliate on margins. Fertile lemma linear, 3–3.5 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, with linear lobes, incised 0.25 of lemma length,awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 45–60 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Distribution (TDWG).** Continent. Africa.
Country/Province/State. West Tropical Africa. Guinea.


**TYPE** from Senegal. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Diouloubou: Adam 18222 (K holo).

**Illustrations (Books):** F.N.Hepper, *F.W.T.A.* 3(2) (1972) (500, Fig.458).

**Derivation** (Clifford & Bostock 2007): ultimate spikelet of inflorescence with several awns or awn-like structures.


**Habit, Vegetative Morphology.** Annual. Culms 80 cm long. Ligule a ciliolate membrane, 2 mm long, truncate. Leaf-blades 10–20 cm long, 1–2 mm wide. Leaf-blade apex attenuate, filiform.

**Inflorescence.** Synflorescence compound, scanty, 20–25 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, exerted. Spatheole linear, 3.5–4 cm long, scarios, glabrous. Peduncle 4–4.5 cm long, antorosely scabrous above. Racemes spaced, 1 single, 1.5–2 cm long, bearing few fertile spikelets, bearing 2 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Spikelet packing lax. Rhachis internodes filiform. Rhachis internode tip oblique. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, ciliate.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels or well-developed, male, linear, 6 mm long, as long as fertile, separately deciduous. Companion sterile spikelet callus cuneate, 1 mm long, truncate. Companion sterile spikelet glumes coriaceous, glabrous, acuminate, awned, both glumes awned, with 1–2 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes, 4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 6.5–7.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1.8 mm long, pilose, base pungent, attached obliquely. Spikelet callus hairs red.

**Glumes.** Glumes dissimilar, exceeding florets, firmer than fertile lemma, shiny. Lower glume oblong, 1 length of spikelet, coriaceous, dark brown, without keels, 7 -veined. Lower glume lateral veins obscure. Lower glume surface asperulous, rough above. Lower glume apex dentate, 2 -fid, awned, 2 -awned, aawn 4–5.5 mm long. Upper glume oblong, without keels, 3 -veined. Upper glume apex entire, awned, 1 -awned, aawn 8–12 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 4 mm long, hyaline, 2 -veined, ciliate on margins. Fertile lemma linear, 3.5 mm long, hyaline, without keel, 1 -awned, 0–3 -veined, one-awned. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 20–40 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Lodicules 2, oblong, 0.5 mm long, fleshy, truncate. Anthers 3.

**Distribution (TDWG).** Continent. Africa.
Country/Province/State. West Tropical Africa. Guinea, Senegal.


**Illustrations:** None found.


**Habit, Vegetative Morphology.** Annual. Culms 15–60 cm long. Ligule a ciliolate membrane. Leaf-blades 2–8 cm long, 1–2 mm wide.

**Inflorescence.** Synflorescence compound, scanty, 4–20 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, exserted. Spatheole linear, 2–3 cm long, scarious. Racemes 1, single, 1.5–2.5 cm long, bearing few fertile spikelets, bearing 4–6 fertile spikelets on each. Rhachis fragil at the nodes, glabrous on margins. Spikelet packing lax. Rhachis internodes filiform. Rhachis internode tip oblique. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 1–2 mm long, glabrous.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 7–8 mm long, longer than fertile, separately deciduous. Companion sterile spikelet callus linear, 1–1.5 mm long, truncate or obtuse. Companion sterile spikelet glumes coriaceous, 3 -veined, glabrous, acuminate, muticous. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, subterete, 3.5–4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1–1.5 mm long, pubescent, base truncate, attached obliquely.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline, 1 -veined, without lateral veins, eciliate on margins. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.7–0.8 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3.


**Derivation (Clifford & Bostock 2007):** Gk. *skyphos*, cup; L. fero, bear. There is a trumpet-shaped appendage at the apex of the peduncle.


**Habit, Vegetative Morphology.** Annual. Culms erect, 10–40 cm long. Leaf-sheath auricles erect, 2–3 mm long. Ligule a ciliolate membrane. Leaf-blades filiform, 10–20 cm long, 0.5 mm wide.

**Inflorescence.** Synflorescence compound, fastigate, 20–30 cm long.

Inflorescence comprising only a few spikelets, comprising 2 fertile spikelets, terminal and axillary, subtended by a spatheole, enclosed. Spatheole linear, 2.5–3.5 cm long, scarious. Peduncle expanded into a
conical flask at apex (2 mm long). Spikelets in threes. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 2 in the cluster. Pedicels present, filiform, 2 mm long, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas, linear, 2–4 mm long, shorter than fertile, separately deciduous. Companion sterile spikelet callus linear, 0.25 mm long, truncate. Companion sterile spikelet glumes chartaceous, glabrous, acuminate.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, subterete, 6–7 mm long, falling entirely, deciduous with accessory branch structures. Spikelet callus cuneate, 1.5 mm long, pilose, base pungent, attached obliquely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, chartaceous, without keels, keel-less except near apex, 6 -veined. Lower glume lateral veins distinct. Lower glume surface with a longitudinal median groove. Lower glume apex dentate, 2 -fid. Upper glume oblong, without keels, 3 -veined. Upper glume apex acute, awned, 1 -awned, awn 12–14 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma oblong, 3 mm long, hyaline, without keel. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.2 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 45–50 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.


**Illustrations (Books):** H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (310, Fig. 248 as *Monium congestum*).

**Derivation** (Clifford & Bostock 2007): L. *trepidus*, restless; -aria, pertaining to. The inflorescence is lax and mobile in light winds.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Anthistiriinae.

**Habit, Vegetative Morphology.** Annual. Culms 30–60 cm long. Ligule a ciliolate membrane. Leaf-blades flat or involute, 3–8 cm long, 1 mm wide, flaccid. Leaf-blade surface glabrous.

**Inflorescence.** Synflorescence compound, paniculate, 15–30 cm long, lax.

Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, subtended by a spatheole, enclosed. Spathelea linear, 1.2–2 cm long, scarious, glabrous or pilose. Peduncle 0.4–0.8 cm long. Spikelets in threes. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 2 in the cluster. Pedicels present, filiform, 1.5 mm long, ciliate.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels or well-developed, containing empty lemmas or male, lanceolate, 4.5–6 mm long, longer than fertile, separately deciduous. Companion sterile spikele callus linear, 1.5–2 mm long, truncate. Companion sterile spikelet glumes coriaceous, 7–9 -veined, glabrous, acuminate, muticous. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, subterete, 3.5–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1 mm long, pubescent, base obtuse or acute, attached obliquely.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3 mm long, hyaline, 0–2 -veined, ciliate on margins, obtuse. Fertile lemma lanceolate, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 20–30 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 3 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** West Tropical Africa. Guinea, Sierre Leone.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk. *treis,* three; *chaete,* bristle. Lemma bifid with a dorsal awn.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Anthistiriinae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms geniculately ascending, 30–60 cm long, 3–6 -noded. Leaf-sheaths pilose. Ligule an eciliate membrane, 3 mm long. Leaf-blades involute, 7–25 cm long. 0.5–3 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade apex acuminate.

**Inflorescence.** Synflorescence compound, linear, 10–25 cm long.

Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, subtended by a spatheole, enclosed. Spatheole linear, 1.5–3 cm long, scarious. Spikelets in threes. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 2 in the cluster. Pedicels present, filiform, 1–1.5 mm long, ciliate, with red hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 5.5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1.5 mm long, pubescent, base pungent, attached obliquely. Spikelet callus hairs red.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3 mm long, hyaline, 0 -veined, without midvein, without lateral veins, ciliate on margins. Fertile lemma linear, 3–3.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 20–30 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 1.5–2 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** West Tropical Africa. Guinea, Sierre Leone.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *tria,* three, spicula, small-spike; *-ata,* possessing. The upper glume of the sessile spikelet is three-dentate.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Anthistiriinae.

Inflorescence. Synflorescence compound, linear, 20–40 cm long.

Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, subtended by a spatheole, enclosed. Spatheole linear, 2–3 cm long, scarious. Peduncle 1.2 cm long. Spikelets in threes. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 2 in the cluster. Pedicels present, filiform, 5 mm long, ciliate, with dark brown hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, male, linear, 8–10 mm long, as long as fertile, separately deciduous. Companion sterile spikelet callus oblong, 1 mm long, 2-toothed or emarginate. Companion sterile spikelet glumes chartaceous, 11–13 -veined, glabrous, setaceously acuminate, mucicous. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or oblong, dorsally compressed, 8–10 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus linear, 3–3.5 mm long, bearded, base pungent, attached obliquely. Spikelet callus hairs dark brown.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma, shiny. Lower glume oblong, 1 length of spikelet, coriaceous, dark brown, without keels, 7 -veined. Lower glume lateral veins obscure. Lower glume surface pubescent, hairy below. Lower glume apex entire, truncate or obtuse. Upper glume oblong, coriaceous, without keels, 3 -veined. Upper glume margins ciliate. Upper glume apex dentate, 3 -fid, muticous or awned, 1 -awned, awn 2–5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 35–70 mm long overall, with twisted column. Column of lemma awn 22–45 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 3.5–4 mm long. Caryopsis 4 mm long.


Derivation (Clifford & Bostock 2007): in honor of E. Bowman (fl.1903) who collected in Argentina.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 20–40 cm long. Leaf-sheaths 7–10 cm long. Ligule an eciliate membrane, 4–6 mm long. Leaf-blades filiform, convolute, 10–17 cm long, 0.5 mm wide. Leaf-blade surface ribbed.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 15–20 cm long, 0.2–0.3 cm wide, bearing few spikelets. Primary panicle branches 2–4 -nate, 4–6 cm long. Panicle axis 4–5 noded. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4 mm long, 0.9 length of upper glume, membranous, without keels. Lower glume apex
acute. Upper glume lanceolate, 4.5 mm long, membranous, without keels, 3 -veined. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, subterete, 3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn flexuous, 45–60 mm long overall. Palea without keels.


**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Western South America, Southern South America. Bolivia. Argentina Northwest, Chile North.
Jujuy. Tarapaca, Antofagasta.


**Classification.** Subfamily Pooideae, Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations extravaginal or intravaginal. Culms erect, 10–20 cm long. Culm-nodes pubescent. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface or puberulous. Ligule an eciliate membrane, obtuse. Collar glabrous. Leaf-blades straight or curved, filiform, convolute, 2–8 cm long, 0.3–0.4 mm wide. Leaf-blade surface scaberulous, rough abaxially, puberulous, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 3.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.5 mm long, pubescent, hairy in a ring below, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.5–5 mm long, 1 length of upper glume, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex acuminate. Upper glume lanceolate, 3.5–5 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 2.5–3.5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 1–1.5 mm long. Lemma apex awned, 1 -awned. Principal lemma awn curved, 9–14 mm long overall, persistent. Palea 2–2.5 mm long. Palea surface pubescent, hairy on back.

**Flower and Fruit.** Lodicules 2. Caryopsis with adherent pericarp, ellipsoid, 1.8 mm long. Hilum linear, 0.66 length of caryopsis.

**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Southern South America. Argentina Northwest.
Jujuy.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–60 cm long. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades filiform, involute, 3–25 cm long, 1 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Pedicled spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5.3–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous or sparsely hairy, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.3–7.5 mm long, 1 length of upper glume, hyaline, without keels. Lower glume apex acuminate. Upper glume lanceolate, 5.3–7.5 mm long, hyaline, without keels. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 3–4.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn flexuous, 40–80 mm long overall. Palea without keels.


**Illustrations (Books):** S.A. Renvoize, *Gramineas de Bolivia* (1998) (76, Fig. 15 as *Stipa*).

**Derivation** (Clifford & Bostock 2007): in honor of Hans Meyer (fl. 1907) who collected in Ecuador.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 20–35 cm long, 0.5 mm diam. Culm-internodes distally glabrous. Culm-nodes glabrous. Leaves 2–4 per branch. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 3–4 mm long. Leaf-blades involute, 1 mm wide, stiff. Leaf-blade surface ribbed, scabrous, rough axadially.

**Inflorescence.** Inflorescence a panicle. Pedicle pubescent above, cylindrical at apex or tipped by a glumeaceous appendage. Panicle open, linear, 3–10 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–9.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3–0.5 mm long, pubescent, acuminate.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–9.5 mm long, 1 length of upper glume, hyaline, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex acuminate. Upper glume lanceolate, 7–9.5 mm
long, 2–3 length of adjacent fertile lemma, hyaline, without keels, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic, subterete, 3.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma midvein pubescent. Lemma lateral veins obscure. Lemma surface glabrous, with conspicuous apical hairs. Lemma margins convolute, covering most of palea, pubescent. Lemma hairs 2.4–4 mm long. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 9–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea oblong, chartaceous, 2 -veined, without keels.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica, Western South America. Costa Rica, Bolivia, Ecuador, Peru.


**Illustrations (Journals):** *Blumea (Blumea Supp.3: 68 (1946)).


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Rhizomes short. Culms erect, 15–20 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 5–7 mm long, acuminate. Leaf-blades filiform, involute, 5–10 cm long, 0.3–0.4 mm wide. Leaf-blade apex pungent.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, purple, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 5.5 mm long, membranous, purple, without keels, 3 -veined. Upper glume apex acute, mucronate.

**Florets.** Fertile lemma lanceolate, subterete, 4 mm long, chartaceous, grey, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma hairs 1–1.5 mm long. Lemma apex awned, 1 -awned. Principal lemma awn curved, 3–3.5 mm long overall, deciduous, limb puberulous, glabrescent towards tip. Palea 1 length of lemma, 2 -veined, without keels. Palea surface pilose.

**Flower and Fruit.** Anthers 3, 1.5–2 mm long, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Southern South America. Argentina Northwest. Jujuy.


**Derivation** (Clifford & Bostock 2007): L. *mucro*, sharp point; -*ata*, possessing. With glumes or lemmas contracted into a short hard point or bifid and shortly awned from between the teeth.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial. Culms erect or geniculately ascending, 60–100 cm long. Culm-nodes pubescent. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades flat or involute, 10–20 cm long, 1–3 mm wide. Leaf-blade surface pubescent, sparsely hairy, hairy on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, dense, nodding, 10–30 cm long. Primary panicle branches appressed or ascending, 1–2 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, pubescent (tawny), acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume oblong, 1 length of upper glume, membranous, purple, without keels, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate. Upper glume oblong, 25–40 mm long, membranous, purple, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, suberete, 5–6 mm long, 1 mm wide, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface papillose, rough above, pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck or surrounded by a ring of hairs, with this appendage 0.5 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 35–50 mm long overall, with twisted column. Middle segment of lemma awn 8–9 mm long. Column of lemma awn 10 mm long, hirsute. Palea 2 -veined, without keels.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica, Northern South America, Western South America, Southern South America. Bolivia. Argentina Northwest, Chile North.

Catamarca, Jujuy, Salta, Tucuman. Tarapaca, Antofagasta, Atacama.


**Derivation** (Clifford & Bostock 2007): L. blunt. Glumes or lemmas apically rounded.
Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 30–60 cm long. Ligule an eciliate membrane, 3–7 mm long. Leaf-blades filiform, 10–25 cm long, 0.5–1 mm wide, stiff. Leaf-blade surface ribbed, scabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent, obtuse.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, purple, without keels. Lower glume apex obtuse. Upper glume lanceolate, 2.5–3 mm long, membranous, purple, without keels. Upper glume apex obtuse.

Florets. Fertile lemma lanceolate, suberete, 2.5–2.8 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn straight or flexuous, 8–10 mm long overall. Palea 1 length of lemma, 2 -veined, without keels.


Distribution (TDWG). Continent: South America.


Illustrations: None found.
Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Oruro Department, Bolivia.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 6–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 6–7.5 mm long, 1 length of upper glume, hyaline, without keels. Lower glume apex acuminate. Upper glume lanceolate or ovate, 6–7.5 mm long, hyaline, without keels. Upper glume apex acuminate.

Florets. Fertile lemma linear, suberete, gibbous, 4.2–4.6 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma apex attenuate, awned, 1 -awned. Principal lemma awn straight, 3–5(–7) mm long overall, deciduous. Palea without keels.

Distribution (TDWG). Continent. South America.


**Illustrations** (Journals): Ruizia (13:70, Fig 8l-m (1993) as Stipa).

**Derivation** (Clifford & Bostock 2007): L. rigidus, stiff; seta, bristle. Lemma awn rigid.

**Classification**. Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–50 cm long. Ligule an eciliate membrane, 4 mm long. Leaf-blades filiform, convolute, 25–45 cm long, 0.5 mm wide. Leaf-blade surface ribbed, scabrous, glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 6–15 cm long. Panicle axis with lower internodes 2–4 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.3 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.2 mm long, 0.8 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 4 mm long, membranous, without keels, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 3–4 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy all along. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn straight, 6–10 mm long overall, limb puberulous. Palea 2.5–2.9 mm long, 1 length of lemma, without keels.

**Flower and Fruit.** Lodicules 3, 0.6 mm long. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. rosea, pink.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–60 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 3–4 mm long. Leaf-blades involute, 12–20 cm long, 1 mm wide. Leaf-blade surface ribbed, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, red, without keels. Lower glume lateral veins obscure. Lower glume apex acuminate. Upper glume lanceolate, 7 mm long, membranous, red, without keels. Upper glume primary vein obscure. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma midvein ciliate. Lemma surface with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 3 mm long. Lemma apex awned, 1 -awned. Principal lemma awn flexuous or bigeniculate, 10 mm long overall, with a straight or slightly twisted column. Palea without keels.


**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Western South America. Ecuador, Peru.


**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L. beautiful, graceful. Mostly a reference to habit.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 15–30 cm long. Ligule an eciliate membrane, 3–4 mm long. Leaf-blades filiform, convolute, 10–15 cm long, 0.3–0.4 mm wide. Leaf-blade surface ribbed, glabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.3 mm long, pubescent, hairy in a ring above, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.5 mm long, 0.9 length of upper glume, membranous, purple, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 4 mm long, membranous, purple, without keels, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, pubescent, awned, 1 -awned. Principal lemma awn flexuous, 45–65 mm long overall, with twisted column. Palea 2.5 mm long, 1 length of lemma, without keels.

**Flower and Fruit.** Lodicules 3. 0.6 mm long. Anthers 3. 1–1.2 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 2 mm long. Hilum linear.

**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Southern South America. Chile North. Tarapaca, Antofagasta, Atacama, Coquimbo. Tarapaca, Antofagasta.

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).


**Illustrations**: None found.

**Derivation** (Clifford & Bostock 2007): Gk. agkylos, curved; thrix, hair.


**Habit, Vegetative Morphology**. Perennial. Culms rambling, 100–150 cm long, 2.5–3 mm diam., wiry. Culm-internodes distally glabrous. Lateral branches sparse. Leaf-sheaths smooth, glabrous on surface, inner surface glabrous. Ligule a fringe of hairs. Leaf-blade base broadly rounded. Leaf-blades reflexed, deciduous at the ligule, 1–13.5 cm long, 2.5–7 mm wide. Leaf-blade surface glabrous.

**Inflorescence**. Inflorescence a panicle. Panicle open, lanceolate, 7.5–17.5 cm long. Primary panicle branches ascending, simple, 2–4 cm long. Panicle axis glabrous. Spikelets in pairs. Fertile spikelets sessile and pedicelled. Pedicels present, 2–4 mm long, scabrous.

**Fertile Spikelets**. Spikelets without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, tilted on the pedicel, dorsally compressed, 3.75 mm long, falling entire. Spikelet callus attached transversely.

**Glumes**. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.6 length of spikelet, chartaceous, without keels, 3 -veined. Lower glume surface pilose, hairy above, with tubercle-based hairs or hooked hairs. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, with hyaline margins, without keels, 9 -veined. Upper glume surface pilose, with tubercle-based hairs or hooked hairs. Upper glume apex obtuse.

**Florets**. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, cartilaginous, much thinner on margins, 7–9 -veined, pilose, with tubercle-based hairs or hooked hairs, obtuse. Fertile lemma elliptic, 3.5 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface punctate. Lemma margins flat. Lemma apex acute, laterally pinched.

**Distribution (TDWG). Continent**. Tropical Asia.

**Country /Province /State**. Malesia. Philippines.


**Habit, Vegetative Morphology**. Perennial. Culms decumbent, 30–100 cm long, wiry, 8–20 -noded. Culm-nodes glabrous. Ligule a fringe of hairs, 0.4–0.6 mm long. Leaf-blades linear or lanceolate, flat or involute, 1–4 cm long, 1–4 mm wide. Leaf-blade margins cartilaginous, scabrous.

**Inflorescence**. Inflorescence composed of racemes. Racemes 1, single, paucilateral, 3–10 cm long. Spikelet packing abaxial. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present.

**Fertile Spikelets**. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 2.5–3 mm long, falling entire. Spikelet callus attached transversely.

**Glumes.** Glumes one the lower absent or obscure or two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, clasping, 0–0.25 mm long, 0–0.1 length of spikelet, hyaline, without keels, 0–3 -veined. Lower glume surface glabrous or pubescent. Lower glume apex acute. Upper glume lanceolate, 2.5–3 mm long, 1 length of spikelet, scarious, without keels, 5 -veined. Upper glume lateral veins ribbed. Upper glume surface hispidulous, with tubercle-based hairs (curved). Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 7–9 -veined, ribbed, hispidulous, with tubercle-based hairs (curved), acute. Fertile lemma elliptic, 2.2–2.7 mm long, coriaceous, without keel. Lemma margins flat. Lemma apex acute, mucronate. Palea coriaceous.


Illustrations: None found.


**Habit, Vegetative Morphology.** Perennial. Culms rambling, 50–100 cm long, wiry. Lateral branches ample. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades 3–13 cm long, 2–8 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 1– 6 cm long. Primary panicle branches appressed, indistinct the panicle almost racemose, 0.2–1 cm long, bearing 1–3 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1 mm long, tip cupuliform.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, tilted on the pedicel, dorsally compressed, compressed slightly, 3 mm long, falling entire. Spikelet callus attached transversely.

**Glumes.** Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–1 mm long, 0.15–0.33 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume surface puberulous. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, chartaceous, without keels, 7–9 -veined. Upper glume lateral veins ribbed. Upper glume surface pilose, with hooked hairs. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, chartaceous, 7 -veined, ribbed, pilose, with hooked hairs, acute. Fertile lemma oblong, 3 mm long, coriaceous, without keel. Lemma margins flat. Lemma apex acute, pubescent. Palea coriaceous.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling Uncinia because of its hooked lemma.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Culms 6–10 cm long, 2 -noded. Ligule an eciliate membrane, 1.1–1.5 mm long, lacerate. Leaf-blades filiform, convolute, 3–5 cm long, 0.8–1.3 mm wide. Leaf-blade surface scaberulous, rough abaxially. Leaf-blade apex obtuse.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate, 2.5–3 cm long, 0.4–0.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–1.8 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.8–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma, gaping. Lower glume ovate, 1.9–2.1 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 2–2.3 mm long, 0.75 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 2.8–3 mm long, cartilaginous, keeled, 5 -veined, more than 3-veined. Lemma apex emarginate, awned, 1 -awned. Principal lemma awn subapical, hooked, 0.7–1.2 mm long overall. Palea 0.6 length of lemma. Rachilla extension 0.2 length of fertile floret, pilose, with 0.5–0.7 mm long hairs.
Flower and Fruit. Anthers 3, 0.7–1.2 mm long.


Illustrations (Books): S.Phillips, Poaceae (Gramineae) in I.Hedberg & S.Edwards, Flora of Ethiopia and Eritrea (1995) (323, Fig. 130).


Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate or ovate, dorsally compressed, 4–9 mm long, shorter than fertile, persistent. Companion sterile spikelet glumes chartaceous, wingless or winged on keels, acute, awned, both glumes awned, with 2–8 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, dorsally compressed, 5–11 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 1–3 mm long, pilose, base obtuse, inserted.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate or ovate, 1 length of spikelet, chartaceous or coriaceous, 2-keeled, keeled laterally, wingless or winged on keel. Lower glume intercarinal veins distinct, 7 in number. Lower glume surface convex or flat or concave, glabrous to villous. Lower glume apex dentate, 2 -fid. Upper glume lanceolate, chartaceous, 1-keeled, keeled above. Upper glume awned, 1 -awned, awn 3–9 mm long.


Flower and Fruit. n = 16 (1 ref TROPICOS).


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. aequator, equator; -ensis, denoting origin. Growing near the equator in Ecuador.


Inflorescence. Synflorescence compound, linear.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Peduncle 5–10 cm long, glabrous. Racemes 2–3, paired or digitate, 2–3 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis internodes linear, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 3.5 mm long, villous.

Sterile Spikelets. Companion sterile spikelets represented by single glumes, 1 mm long, shorter than fertile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.
Country /Province /State. Western South America. Colombia, Ecuador.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Africa.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–250 cm long. Ligule a ciliolate membrane. Leaf-blades flat or conduplicate, 10–40 cm long, 2–7 mm wide. Leaf-blade apex abruptly acute.

Inflorescence. Synflorescence compound, paniculate, open.


Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 4–7 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute, awned, one glume awned, with 6 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, dorsally compressed, 4–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 5 mm long, hyaline, 2-veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2-fid, incised 0.33–0.5 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 5–25 mm long overall, with twisted column. Column of lemma awn glabrous.

Flower and Fruit. $n = 20$ (1 ref TROPICOS).


Andropogon alopecurus (Desv.) Hack. DC. Monog. Phan. 6: 381. (1889).

Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. alopex, fox; oura, tail. The spicate inflorescence resembling a fox tail.


Inflorescence. Inflorescence composed of racemes. Racemes 1, single, 4–6.5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs on 2 margins. Rhachis internodes clavate, 4 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets squeezed between internode and pedicel, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, 4 mm long, ciliate, hairy on margins.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas, linear, dorsally compressed, 3 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachillae extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, laterally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2-fid, incised 0.5 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 6–8 mm long overall, with twisted column. Column of lemma awn puberulous. Palea absent or minute.

Country/Province/State: Western Indian Ocean. Mauritius, Madagascar, Reunion.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial. Culms solitary or caespitose. Rhizomes absent or elongated. Butt sheaths glabrous. Culms geniculately ascending or decumbent, 8–60 cm long. Ligule an eciliate membrane. Leaf-blades flat or convolute, 1–15 cm long, 1–4 mm wide. Leaf-blade midrib evident.

**Inflorescence.** Inflorescence composed of racemes, terminal. Racemes 2, paired, 2–8 cm long. Rhachis fragile at the nodes, ciliate on margins or villous on margins. Rhachis hairs white. Rhachis internodes linear. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear or clavate, ciliate or villous, with white hairs.

**Spikelets.** Companion sterile spikelets well-developed, male, lanceolate or ovate, dorsally compressed, 4–8 mm long, as long as fertile, persistent. Companion sterile spikelet glumes chartaceous, wingless or winged on keels, acute, awned, one glume awned, with 1–3 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 5–8.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1 mm long, pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate or elliptic, 1 length of spikelet, chartaceous or coriaceous, 2-keeled, keeled laterally, wingless or winged on keel. Lower glume intercarinal veins distinct, 2–6 in number. Lower glume surface convex or flat or concave, glabrous to villous. Lower glume apex dentate, 2 -fid. Upper glume lanceolate, chartaceous, 1-keeled, keeled above. Upper glume awned, 1 -awned, aww 2–6 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0 -veined, without keels.

**Flower and Fruit.** $n = 30$ (ca), or 40 (2 refs TROPICOS). $2n = 20$ (1 ref TROPICOS as *A. longipes*).


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 2–3, paired or digitate, 6–7 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform, 0.33 length of fertile spikelet. Raceme-bases filiform, 2–5 mm long, hirsute. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster.
Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3 mm long, without a translucent median line, ciliate.

**Sterile Spikelets.** Basal sterile spikelets well-developed, 6–8 in number (lower raceme), male, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, male, lanceolate, 6.5 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes winged on keels, 11 -veined. Companion sterile spikelet lemmas enclosed by glumes, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, attached transversely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 6.5 mm long, 1 length of spikelet, chartaceous, without keels, keel-less except near apex, winged on keel, winged narrowly, 14–18 -veined. Lower glume surface glabrous. Lower glume apex attenuate. Upper glume lanceolate, 5.5 mm long, 1-keeled. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 2–2.5 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma linear, hyaline, without keel, 0–3 -veined. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.66 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Caryopsis with adherent pericarp, oblong or ovoid.


**Illustrations (Journals):** *Revista Brasil. Bot.* (29: 296, Fig.1 (2006)).


**Classification.** Subfamily Panicoideae. Tribe: Sacchaeaee. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 20–100 cm long, 1–1.5 mm diam. Culm-nodes glabrous. Lateral branches ample. Ligule an eciliate membrane, 1–2.5 mm long, brown. Leaf-blades flat or conduplicate, 15–30 cm long, 1.5–3 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Synflorescence compound, paniculate.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Racemes 2, paired, 2–4 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 0.5–1 mm long. Rhachis internodes cuneate, 2–2.5 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets squeezed between internode and pedicel, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, 2–2.5 mm long, ciliate, with 0.5–1 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate or elliptic, dorsally compressed, 5.5–6 mm long, longer than fertile. Companion sterile spikelet glumes chartaceous, glabrous, ciliate on margins, acute, awned, one glume awned, with 5–18 mm long awn. Companion sterile spikelet lemmas 1–2.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets linear, laterally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus 1 mm long, pubescent, base acute, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3–4.2 mm long, hyaline, 2 -veined. ciliate on margins. Fertile lemma lanceolate, 2.8–4 mm long, hyaline, without keel, 1 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 30–50 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 1.5–2 mm long, 0 -veined.

**Flower and Fruit.** Anthers 3, 1.7–2.1 mm long.

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Mexico. Central Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba. Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil North.


**TYPE** from South Africa. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: S. Africa.

**Illustrations (Books):** L.K.A. Chippindall, Grasses and Pastures of South Africa (1955) (500, Fig. 403).

**Images:** F.van Oudtshoorn, Guide to Grasses of Southern Africa (1999).

**Derivation (Clifford & Bostock 2007):** stalked male spikelets subtended by a conspicuous appendage.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 5–7 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute, awned, one glume awned, with 1–2 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 5 mm long, hyaline, 2 -veined. Fertile lemma oblong, 1.5 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.33–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–15 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3.

n = 10, or 20, or 30 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa.


Inflorescence. Synflorescence compound, linear.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 3–5 cm long. Peduncle 3–5 cm long. Racemes 2, paired, 2.5–4 cm long. Rhachis fragil at the nodes, villous on margins. Rhachis hairs 3 mm long. Rhachis internodes linear, 2–3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3–4 mm long, villous, with 3 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by single glumes, linear, 0.5–1.5 mm long, shorter than fertile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, inserted. Spikelet callus hairs 0.33 length of spikelet.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7–12 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous.

Flower and Fruit. Anthers 1. 

n = 10 (1 ref TROPICOS).


Country /Province /State. Southeastern USA. Alabama, Florida.


TYPE from Uruguay. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: J. Arechavaleta 204, no date, Uruguay: Montevideo (W; IT: US-75544 (fragm. ex W)).

Illustrations (Journals): *Revista Brasil. Bot.* (29: 296, Fig.2 (2006)).

Derivation (Clifford & Bostock 2007): *L. arena*, sandy place; *-aria*, pertaining to. Of sandy habitats.


Inflorescence. Synflorescence compound, paniculate.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole lanceolate, 6–8 cm long. Racemes 2–3, paired or digitate, 3–6 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs 10–16 mm long. Rhachis internodes filiform, 0.66 length of fertile spikelet. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, villous, with 10–16 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, 5–7 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 3.5–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 2–5.5 mm long overall, with a straight or slightly twisted column. Column of lemma awn 0.5–0.8 mm long, glabrous.

Flower and Fruit. Anthers 3, 0.8 mm long. Caryopsis 1.2–2.4 mm long, dark brown.

Distribution (TDWG). Continent. South America.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, cushion forming. Culms 20–25 cm long. Ligule an eciliate membrane. Leaf-blades filiform, terete, 3–5 cm long, 1 mm wide.

Inflorescence. Inflorescence composed of racemes, terminal. Racemes 1–2, single or paired, 1–3 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 5 mm long. Rhachis internodes linear. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate, hairy all along but hairs longer above, with 5 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 5 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, acute, muticous. Companion sterile spikelet lemmas enclosed by glumes.
Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 6–6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 1 mm long, bearded, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret lanceolate, 3 mm long, hyaline, 2 -veined. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma lanceolate, 4.5 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 0.75 length of lemma.


TYPE from Cameroun, Nigeria. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Cameroun, Batanga: Bates 336 (K syn):.


Derivation (Clifford & Bostock 2007): L. auris, ear; -ula, diminutive; -ata, possessing. Leaf-blades rounded at the base or with auricles.


Inflorescence. Synflorescence compound, paniculate, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 6–10 cm long. Racemes 2, paired, 4–7 cm long. Rhachis fragile at the nodes, glabrous on surface or pubescent on surface, ciliate on margins. Rhachis internodes clavate, 3 mm long. Rhachis internode tip oblique, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, 3 mm long, ciliate, tip lobed (bilobed).

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas or male, oblong, dorsally compressed, 4 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, acute, awned, one glume awned. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 5.5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 5 mm long, hyaline, 3 -veined, ciliate on margins. Fertile lemma oblong, 4 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–17 mm long overall, with twisted column. Column of lemma awn glabrous. Palea oblong, 0.25 length of lemma, 0 -veined, without keels.
Flower and Fruit. Anthers 3, 3 mm long.


**Type** from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Brazil, Santa Maria: Norrmann, Keeler & Barreto 146 (ICN holo, BAA, CORD, CITES, K, MBM, SI).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Ismar L. Barreto, Argentinian agronomist.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.


**Inflorescence.** Synflorescence compound, linear.


**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 4–7 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, acute, muticous. Companion sterile spikelet lemmas muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, 3.5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled laterally. Lower glume intercarinal veins distinct, 2 in number. Lower glume surface concave, asperulous, rough above. Upper glume lanceolate, coriaceous, 1-keeled.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma margins ciliate. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, curved, 4–8 mm long overall. Palea 1 length of lemma.

Flower and Fruit. Anthers 3, 3 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil South.

Rio Grande do Sul.


**Type** from Somalia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Socotra: *Balfour* 764 (K syn); Socotra: *Bent* (K syn).

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.
Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 20–30 cm long. Lateral branches suffrutescent. Leaf-sheaths smooth. Ligule an eciliate membrane. Leaf-blades 1–2 cm long, 0.5–1.5 mm wide, glaucous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Peduncle 2–3 cm long, pilose above. Racemes 1–2, single or paired, 1–2 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs white, 2–3 mm long. Rhachis internodes filiform, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, dorsally compressed, 5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, 7–9 -veined, glabrous, acute. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3 mm long, hyaline, 2 -veined, ciliolate on margins. Fertile lemma lanceolate, 2.5 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8 mm long overall, with twisted column. Column of lemma awn glabrous. Palea oblong, 1.5 mm long.

Flower and Fruit. Anthers 3, 2 mm long.


Illustrations (Journals): Ruizia (13:442 Fig 59a-c (1993)), Rodriguesia (63: 937, Fig.3 (2012)), Revista Brasil. Bot. (29: 296, Fig.3 (2006)).


Inflorescence. Synflorescence compound, paniculate (obovate), dense.

Inflorescence composed of racemes, terminal and axillary, subtended by a spathole, embraced at base by subtending leaf. Spathole linear, 3–4 cm long. Racemes 2, paired, 2.5–3.5 cm long. Rhachis fragile at the nodes, plumose on surface, plumose on margins. Rhachis hairs 6–8 mm long. Rhachis internodes
filiform, 2.5–3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3–4 mm long, plumose, with 6–8 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels or rudimentary (except terminal), 0–1 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3–3.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 0.2 mm long, pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2–2.4 mm long, hyaline, 0 -veined, ciliate on margins. Fertile lemma lanceolate, 1.6–2.2 mm long, hyaline, without keel. Lemma apex entire, acute, muticous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 0.5–0.7 mm long, purple. Caryopsis with adherent pericarp, 1.6–2 mm long.

\[ n = 30 \text{ (1 ref TROPICOS)} \]
\[ 2n = 60 \text{ (1 ref TROPICOS)} \]

**Distribution (TDWG).** Continent: North America, South America. Country /Province /State. Southeastern USA, Mexico. Florida. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago. French Guiana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay.


**Illustrations (Journals):** *Novon* (13: 374 Fig 4 (2003)).

**Derivation (Clifford & Bostock 2007):** L. -ensis, denoting origin. From Bogota, Colombia.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogonineae.

**Distribution (TDWG).** Continent. South America.

Country /Province /State. Western South America. Colombia.


Inflorescence. Synflorescence compound, scanty.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 5–6 cm long. Peduncle antrorsely scabrous above. Racemes 2–3, paired or digitate, 4–6 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis internodes filiform, 4–5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 4–5 mm long, plumose.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 5–5.5 mm long, longer than fertile. Companion sterile spikelet glumes chartaceous, 5 -veined, glabrous, acute.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma lanceolate, hyaline, without keel, 1 -veined, 0–3 -veined. Lemma apex entire, muticous.


Derivation (Clifford & Bostock 2007): Gk. brachys, short; stachys, ear of corn. Inflorescence comprised of short branches or spikelets short.


Inflorescence. Synflorescence compound, linear or paniculate.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, exserted or embraced at base by subtending leaf. Spatheole linear, 3–3.5 cm long. Racemes 2, paired, 1–2 cm long, bearing 4–6 fertile spikelets on each. Rhachis fragile at the nodes, villous on margins. Rhachis hairs 3 mm long. Rhachis internodes filiform, 1.5–2 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, curved, 2.5–4 mm long, villous, with 3 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3–4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 6–9 mm long overall.

**Flower and Fruit.** Anthers 1.

**Distribution (TDWG).** Continent. North America.
Country /Province /State. Southeastern USA. Florida, Georgia.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations (Journals):** Novon (13: 369 Fig 1 (2003)), Revista Brasil. Bot. (29: 296, Fig.4–5 (2006)).

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 34–64 cm long, 3–5 -noded. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule a ciliolate membrane, 0.2–0.6 mm long. Leaf-blades flat or conduplicate, 3.5–17 cm long, 0.5–2 mm wide. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex puberulous acute or acute.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 5.5–11 cm long. Peduncle 8–19 cm long. Racemes 2–3(–5), paired or digitate, 2.5–6 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis internodes linear, 2–3(–4) mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2–3(–4) mm long, villous.

**Sterile Spikelets.** Companion sterile spikelets well-developed, lanceolate, 2–5 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.5–6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3.9–4.5 mm long, hyaline, 2 -veined, ciliate on margins, fringed above. Fertile lemma lanceolate, 3–4 mm long, 0.4–0.9 mm wide, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.25–0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 16–22 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous. Palea 1.2–2.8 mm long, hyaline, 0 -veined, without keels. Palea apex entire or erose, acute, glabrous or ciliate.

**Flower and Fruit.** Lodicules 2, 0.7 mm long. Anthers 3, 0.7–1.2 mm long, yellow. Caryopsis 1.5–1.8 mm long.

**Distribution (TDWG).** Continent. South America.
Country /Province /State. Brazil. Brazil Southeast.
Espírito Santo, Minas Gerais.


Illustrations: None found.


Inflorescence. Synflorescence compound, paniculate, 40–60 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 3–5 cm long. Racemes 3–15, digitate, 2.5–6 cm long. Rhachis fragile at the nodes, glabrous on surface, glabrous on margins. Rhachis internodes filiform, 3–5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 2–3 mm long, bearing a few hairs or glabrous.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 4 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, 3 -veined, glabrous, acute. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, acute, 4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3 mm long, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, muticous. Palea oblong, 1–1.5 mm long, 0 -veined.

Flower and Fruit. Anthers 3, 2 mm long. n = 10 (1 ref TROPICOS).


Andropogon burmanicus Bor. Grasses Burma, Ceyl., Ind. / Pakist. 688 (1960).

Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).


Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Culms 100 cm long. Ligule an eciliate membrane. Leaf-blades 20–40 cm long. 1–4 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes, terminal. Racemes 4–5, digitate, erect, 5–6 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs 1.5–2 mm long. Rhachis internodes cuneate, 3 mm long. Rhachis internode tip transverse, crateriform, with hairy rim. Spikelets squeezed between internode and pedicel, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion
sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, 3 mm long, ciliate, hairy all along but hairs longer above (around rim), with 1.5–2 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 3.5 mm long, shorter than fertile, persistent. Companion sterile spikelet glumes chartaceous, keeled, concave, ciliate on margins, acute, muticous. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, dorsally compressed, 4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, 3.5–4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0 -veined, without keels.

**Flower and Fruit.** Anthers 3, 2.5 mm long.


**Andropogon cabanisii** Michx. *Fl. Bor. Am.* 1: 57 (1803).


**TYPE** from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: USA, Carolina: Coll? (Pholo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Jean Louis Cabanis (1816–1906) who collected in south-eastern USA.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial. Culms 60–100 cm long. Lateral branches ample. Leaf-sheaths smooth or scaberulous, glabrous on surface or hirsute. Ligule an eciliate membrane. Leaf-blades 12–25 cm long, 2–4 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole linear, 6–8 cm long. Peduncle 4–7 cm long, hirsute above. Racemes 2, paired, 4–7 cm long, bearing 15 fertile spikelets on each. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 5 mm long. Rhachis internodes linear, 4–6 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 3–5 mm long, plumose, with 5 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, linear, 3–3.5 mm long, shorter than fertile. Companion sterile spikelet glumes pubescent.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–20 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous.


Type: from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Brazil, S da Lapa: Langsdorff (LE holo).

Illustrations (Journals): Revista Brasil. Bot. (29: 296, Fig.6 (2006)).


Sterile Spikelets. Companion sterile spikelets well-developed, comprising 2 unequal glumes without lemmas, lanceolate, 6–6.5 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, 9–11 -veined (lower) or 5–7 -veined (upper), acute.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, 7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 3 -veined, ciliate on margins. Fertile lemma lanceolate, 4.5 mm long, hyaline, without keel. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5–6 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous. Palea 2 mm long.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25–200 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles absent or erect, 0–2 mm long. Ligule an eciliate membrane. Leaf-blades 10–40 cm long, 1–5 mm wide.

Inflorescence. Synflorescence simple or compound, linear.

Inflorescence composed of racemes, terminal or terminal and axillary, subtended by an unspecialized leaf-sheath or a spatheole. Racemes 2, paired, bilateral (as to sterile spikelets), 3–9 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes cuneate or inflated. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate or inflated, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 3.5–6 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, scaberulous, glabrous, acute, muticous or mucronate. Companion sterile spikelet lemmas enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without racchilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, laterally compressed, 4–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7–15 mm long overall, with twisted column. Column of lemma awn glabrous.


Illustrations (Journals): Darwiniana (46: 332, Fig.4 (2008)).


Distribution (TDWG). Continent. South America.


Illustrations (Journals): Revista Brasil. Bot. (29: 296, Fig.7 (2006)).

Derivation (Clifford & Bostock 2007): L. carina, keel; -atus, possessing. Spikelets with keeled lemmas or glumes.


Habit, Vegetative Morphology. Perennial. Culms 50 cm long. Ligule an eciliate membrane. Leaf-blades 7–20 cm long, 2–3 mm wide. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, 2–4 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs evenly distributed, 4 mm long. Rhachis internodes linear, 4 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 4 mm long, villous, hairy all along, with 4 mm long hairs.
Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 5 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.
Country /Province /State. Mesoamerica, Western South America, Brazil. Costa Rica. Bolivia. Brazil West Central, Brazil Southeast.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.


Habit, Vegetative Morphology. Annual, caespitose. Culms 200–250 cm long. Leaf-sheath auricles erect, 3–10 mm long. Ligule an eciliate membrane, 3–10 mm long. Leaf-blade base tapering to the midrib. Leaf-blades 20–40 cm long, 2–8 mm wide.

Inflorescence. Synflorescence compound, paniculate, 6–20 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole lanceolate, 5–8 cm long. Racemes 2, paired, 4–6 cm long. Rhachis fragile at the nodes, puberulous on surface, ciliate on margins. Rhachis internodes filiform, 4 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, 3 mm long, puberulous (on margins, pubescent on surface), tip lobed (bilobed).

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas or male, elliptic, dorsally compressed, 5–10 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes chartaceous, 12 -veined, glabrous or pubescent, acute, awned, one glume awned, with 5–10 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 5.5–10 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus square, 1 mm long, pubescent, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 6–7 mm long, hyaline, 2 -veined, ciliate on margins. Fertile lemma oblong, 5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned,


**TYPE** from China. **Basionym or Replaced Name:** Homoeatherum chinense Nees, Lindley, Nat. Syst. Bot., ed. 2: 448 (1836). **T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database:** HT: Vachell 52, China: Macao (CGE).

**Recent Synonyms:** Andropogon ascinodis C.B.Clarke, Journ. Linn. Soc. 25: 87 [Feb.] (1889).

**Illustrations (Books):** R.M.Polhill, F.T.E.A., Gramineae (3(1982):769, Fig. 180), G.V.Pope et al., Flora Zambesiaca 10, M.A.N.Muller, Grasses of South West Africa/Namibia (1984) (as A. schinzii), G.E.Gibbs Russell et al, Grasses of Southern Africa (1990) (39, Fig. 16), S.Philips, Poaceae (Gramineae) in I.Hedberg & S.Edwards, Flora of Ethiopia and Eritrea (1995) (326, Fig. 131), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 874).

**Illustrations (Journals):** Kew Bulletin (50: 110, Fig.1 (1995)).


**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From China.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 60–200 cm long. Leaf-sheath auricles absent or erect, 0–4 mm long. Ligule an eciliate membrane. Leaf-blades 10–40 cm long, 1–8 mm wide, glaucous. Leaf-blade surface glabrous or pubescent.

**Inflorescence.** Synflorescence compound.


**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate or elliptic, dorsally compressed, 4–7 mm long, shorter than fertile. Companion sterile spikelet glumes membranous, glabrous to pilose, acute, awned, both glumes awned, with (2–)4–10 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, laterally compressed, 5–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 1 length of spikelet, coriaceous, 2-keeled, keeled dorsally. Lower glume surface deeply depressed, glabrous. Upper glume linear, chartaceous, 1-keeled. Upper glume awned, 1 -awned, awn (1–)4–12 mm long.


**Flower and Fruit.** n = 10 (2 refs TROPICOS, 1 as A. patris), or 20 (2 refs TROPICOS, 1 as A. ascinodis).

**Distribution (TDWG).** Continent. Africa, Temperate Asia, Tropical Asia.


Illustrations (Books): S.Phillips, Poaceae (Gramineae) in I.Hedberg & S.Edwards, Flora of Ethiopia and Eritrea (1995) (326, Fig. 131).


Inflorescence. Inflorescence composed of racemes, terminal. Racemes (2–)3–9, digitate, 3–8 cm long. Central inflorescence axis 0–4 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs dark brown. Rhachis internodes filiform or linear. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform or linear, ciliate, with dark brown hairs.

Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 4–8 mm long, as long as fertile, persistent. Companion sterile spikelet glumes chartaceous, glabrous or pubescent, acute, muticous. Companion sterile spikelet lemmas enclosed by glumes.

Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 5–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1 mm long, pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.33–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0 -veined, without keels.


TYPE from Argentina. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: T: T.J.V. Stuckert 20275, no date, Argentina (IT: US-75531 (fragm.)).

Illustrations: None found.


Distribution (TDWG). Continent. South America.


**Illustrations (Books):** S.A. Renvoize, *Gramineas de Bolivia* (1998) (595, Fig. 141).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Sterile Spikelets.** Companion sterile spikelets well-developed, containing empty lemmas or male, linear, 4–6 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, 4–5 mm long, hyaline, without keel. Lemma apex lobed, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 15–18 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Bolivia.

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**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Inflorescence.** Synflorescence compound, linear. Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, enclosed. Spathoae linear. Racemes 1, single, 1–4 cm long. Rhachis fragile at the nodes, with scattered hairs, ciliate on margins. Rhachis internodes clavate, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2.5 mm long, ciliate, hairy on margins.
**Sterile Spikelets.** Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas, linear, 3–4 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–4.2 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret oblong, 2.8–4 mm long, hyaline, 3 -veined, ciliolate on margins. Palea of lower sterile floret 0–2 mm long. Fertile lemma lanceolate, 2–3.2 mm long, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5–8 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous. Palea 2–2.5 mm long, hyaline.

**Flower and Fruit.** Lodicules 2, 0.5–0.7 mm long. Anthers 3, 1.5–1.8 mm long.


**Illustrations (Journals):** *Revista Brasil. Bot.* (29: 296, Fig.8 (2006)).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short, scaly. Culms erect, 100–170 cm long, 2.5–4 mm diam. Culm-internodes terete or channelled, solid, 2.5–18 cm long, distally pubescent. Culm-nodes swollen, glabrous. Lateral branches lacking or sparse. Leaves cauline, 17–50 per branch. Leaf-sheaths 2–9.2 cm long, longer than adjacent culm internode, outer margin glabrous or hairy. Leaf-sheath oral hairs scanty or ciliate. Leaf-sheath auricles erect. Ligule a ciliolate membrane, 0.4–0.6 mm long. Leaf-blades tortuous, lanceolate, 7.1–25 cm long, 9–20 mm wide, glaucous. Leaf-blade midrib conspicuous. Leaf-blade venation with 10–18 secondary veins. Leaf-blade surface glabrous.

**Inflorescence.** Synflorescence compound, scanty. Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Peduncle 11.1–18.3 cm long. Racemes 2, paired, 6–9.2 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes cuneate. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, 4–6 mm long, ciliate, with 3–4.5 mm long hairs, tip cupuliform.

**Sterile Spikelets.** Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, 5.9–10 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes chartaceous, keeled, scabrous, glabrous, acute, muticous. Companion sterile spikelet lemmas 2, enclosed by glumes, 4.7–5.6 mm long, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 6.2–9 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 4.6–4.7 mm long, hyaline, 2 -veined. Fertile lemma lanceolate, 4–4.3 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a
sinus, geniculate, 10–18 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 2.9–3.1 mm long. Palea keels scabrous.

**Flower and Fruit.** Lodicules 2, 0.4–0.7 mm long, truncate. Anthers 1 or 2, 0.6–0.7 mm long. Caryopsis 0.6 mm long.

**Distribution (TDWG).** Continent. South America.
Country /Province /State. Brazil. Brazil West Central.
Distrito Federal, Goiás, Mato Grosso do Sul.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculate-ascending, 25–40 cm long. Ligule an eciliate membrane. Leaf-blades 3.5–7 cm long, 1.5–2 mm wide, glaucous. Leaf-blade surface pubescent, hairy adaxially.

**Inflorescence.** Synflorescence compound, scanty.


**Sterile Spikelets.** Companion sterile spikelets well-developed, lanceolate, 3.7–4.5 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, smooth, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3.5 mm long, hyaline, 2 -veined. Fertile lemma lanceolate, 3.5 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea ovate, 1 mm long. Palea apex obtuse.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa, Temperate Asia.


**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (597, Fig. 142).

**Illustrations (Journals):** *Revista Brasil. Bot.* (29: 296, Fig.9–10 (2006)).

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating connection. From Santa Cruz, Bolivia.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

Inflorescence. Synflorescence compound, linear, 25 cm long, dense.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Peduncle tipped by a glumaceous appendage (5–10mm long). Racemes 1, paired or digitate, 2–2.5 cm long. Rachis fragile at the nodes, ciliate on margins. Rachis internodes linear. Rachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 3–4 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3–3.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


Distribution (TDWG). Continent. South America.
Country /Province /State. Western South America, Brazil. Bolivia.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. curvus, bent; folium, leaf. The leaf-blades become spirally coiled in senescence, or on drying.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 70–100 cm long, 3–5 -noded. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades curved, filiform, involute, 30–60 cm long, 0.3–0.7 mm wide. Leaf-blade apex attenuate.

Inflorescence. Synflorescence compound, scanty, 30 cm long.


Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 4–6 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, 7 -veined, acute, awned, one glume awned, with 1–4.5 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acuminate, 4.5–6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus square, 0.5 mm long, pilose, base obtuse, inserted.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 5 mm long, hyaline, 2 -veined, ciliate on margins, acute. Fertile lemma oblong, 3–4 mm long, hyaline, without keel. Lemma margins ciliolate. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 16–22 mm long overall, with twisted column. Column of lemma awn 6–8 mm long, glabrous. Palea 0.1 length of lemma.

Flower and Fruit. Lodicules 2, oblong, 0.5 mm long, ciliate.


Inflorescence. Inflorescence composed of racemes, terminal. Racemes 2, paired, 4–14 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear or clavate (slightly). Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear or clavate (slightly), ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 6–11 mm long, shorter than fertile, persistent. Companion sterile spikelet glumes herbaceous, dentate, 2 -fid, acuminate, awned, one glume awned, with 3–9 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 8–16 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 1–2 mm long, pilose, base obtuse, inserted.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, asymmetrical, 1 length of spikelet, herbaceous or coriaceous, much thinner above, 2-keeled, keeled laterally, winged on keel, winged broadly, winged above (0.5–0.66 length). Lower glume intercarinal veins distinct, 7–11 in number. Lower glume surface convex or flat or concave, glabrous or pubescent. Lower glume apex dentate, 2 -fid, ciliate. Upper glume lanceolate, chartaceous, 1-keeled, keeled above. Upper glume awned, 1 -awned, awn 4–10 mm long.


Flower and Fruit. n = 18 (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*).

Region. Northern Europe (*), Southwestern Europe, Southeastern Europe.


**Type** from Vezuela. T: from Type of Basionym: fide TROPICOS and Kew Synonomy Database: HT: J.A. Steyermark & J.J. Wurdack 492, 5 Feb 1955, Venezuela: Bolivar: Chimanta Massif, Central Section, vicinity of Summit Camp along Rmo Tirica, in small clumps, spikelets white, leaves gray green, locally frequent, alt. 1925 m (US-2182125; IT: VEN-45172).

**Illustrations (Books):** J.A.Steyermark et al, Flora of the Venezuelan Guayana Vol. 8 (2004) (22, Fig. 5).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 20–65 cm long. Leaves cauline. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking or ciliate. Leaf-sheath auricles erect. Ligule a ciliate membrane, 1.5–1.7 mm long. Leaf-blades 5–15 cm long, 0.5–5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface smooth or scaberulous, rough on both sides.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes (1–)2, paired, 4–5 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs evenly distributed. Rhachis internodes filiform. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3–5 mm long, villous, hairy all along.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, linear, 1.1–2.3 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.1–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 0.9–1.5 mm long, hyaline, 2 -veined, ciliolate on margins. Fertile lemma lanceolate, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7.5–14 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 1–2 mm long.

**Flower and Fruit.** Lodicules 2, cuneate, 0.5–0.7 mm long, fleshy. Anthers 3, 1–1.5 mm long.

**Distribution (TDWG).** Continent: South America.

**Country/Province/State.** Northern South America. Venezuela.


**Illustrations (Books):** S.A.Renvoize, The Grasses of Bahia, 1984 (279, Fig. 106).

**Illustrations (Journals):** Revista Brasil. Bot. (29: 296, Fig.11 (2006)).

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.


**Sterile Spikelets.** Companion sterile spikelets well-developed, containing empty lemmas, lanceolate, 5–6 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous. Companion sterile spikelet lemmas 4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2-fid, incised 0.25 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 3–12 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.


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**Illustrations (Journals):** *Darwiniana* (46: 330, Fig.1 (2008)).

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Cuba.

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**Derivation** (Clifford & Bostock 2007): Gk. *eu-*, well; *kome*, head of hair. Raceme joints silky with soft, long hairs.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–200 cm long. Ligule an eciliate membrane. Leaf-blades conduplicate, 4–30 cm long, 1–3 mm wide. Leaf-blade apex abruptly acute.

**Inflorescence.** Synflorescence simple or compound, scanty, open. Inflorescence composed of racemes, terminal or terminal and axillary, subtended by a spatheole. Spatheole linear, 5–9 cm long. Racemes 2–6, paired or digitate, sinuuous, 2–8 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 3–10 mm long. Rhachis internodes filiform, 4–5 mm long.
Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets ascending, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, curved, 4–5 mm long, plumose, with 3–10 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels or rudimentary, linear or lanceolate, 0–2.5 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous or awned, one glume awned, with 0–3 mm long awn.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, 2–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or lanceolate, 1 length of spikelet, membranous, 2-keeled, keeled laterally. Lower glume intercarinal veins absent. Lower glume surface concave. Upper glume linear or lanceolate, membranous, 1-keeled. Upper glume muticous.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 0–2 -veined, without midvein, without lateral veins or without lateral veins, ciliate on margins. Fertile lemma lanceolate or oblong, hyaline, without keel. Lemma margins ciliolate. Lemma apex lobed, 2 -fid, incised 0.25–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, flexuous or geniculate, 8–20 mm long overall, without a column or with a straight or slightly twisted column. Column of lemma awn glabrous. Palea present or absent or minute, oblong.

**Flower and Fruit.** Anthers 3, 1.5 mm long. 

n = 10 (2 refs TROPICOS). 2n = 20 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Australasia.


### Andropogon exaratus


**Type** from Paraguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *B. Balansa* 224, no date, Paraguay (US-75530 (fragm. ex hb. Henrard)).

**Illustrations:** None found.


**Derivation** (Clifford & Bostock 2007): L. *exaro*, plough up. With furrows between the nerves of the glumes.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial. Culms robust, 100–200 cm long. Ligule an eciliate membrane. Leaf-blades 5–8 mm wide.

**Inflorescence.** Synflorescence compound, scanty. Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Racemes 2–6, paired or digitate, 5–10 cm long. Rhachis fragile at the nodes, pubescent on margins. Rhachis hairs 0.5 mm long. Rhachis internodes cuneate, 3 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, 2.5 mm long, pubescent, with 0.5 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 6 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, 5 mm long, hyaline, without keel.Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn glabrous.

Flower and Fruit. Anthers 3.


Illustrations (Books): L.K.A. Chippindall, Grasses and Pastures of South Africa (1955) (517, Fig. 412, as Hypogynium schlecteri).


Inflorescence. Synflorescence compound, paniculate, 15–30 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spathoelae linear, 1.5–2 cm long, herbaceous. Peduncle pubescent above. Racemes 1, single, 6–12 cm long. Rhachis fragile at the nodes, subterete, glabrous on margins. Rhachis internodes linear, 1–1.5 mm long. Rhachis internode tip transverse, flat, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 0.5–1 mm long, glabrous, tip rectangular.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 3–4 mm long, shorter than fertile, persistent. Companion sterile spikelet lemmas enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.5–4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 0.8 mm long, glabrous, base truncate, attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2 mm long, 0.5 length of spikelet, hyaline, 2 -veined. Fertile lemma linear, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, muticous. Palea absent or minute.

Flower and Fruit. Anthers 3, 1.6–2 mm long.


**Derivation (Clifford & Bostock 2007):** L.-ana, indicating location. From Florida State, USA.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–160 cm long. Late ral branches ample. Leaf-sheaths antrorsely scabrous. Ligule an eciliate membrane. Leaf-blades 25–50 cm long, 2–6 mm wide. Leaf-blade surface scabrous.

**Inflorescence.** Synflorescence compound, paniculate.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, exserted or embraced at base by subtending leaf. Spatheole linear or lanceolate, 4–5 cm long. Peduncle 1 cm long or 2 cm long, hirsute above. Racemes 2, paired, 3–4 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 5–8 mm long. Rhachis internodes clavate, 3–3.5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, curved, 4–5 mm long, plumose, with 5–8 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels or represented by single glumes, linear, 1 mm long, shorter than fertile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.5–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, straight or geniculate, 8–12 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 1.

\( n = 10 \) (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southeastern USA. Florida, Georgia.


**TYPE** from Gabon. T: Type of Basionym: fide TROPICOS and Kew Synonymy Database: Gabon, Cape Lopez: Chevalier 4336 (K holo).

**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L.-ense, denoting origin. From Gabon.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Inflorescence.** Synflorescence compound, paniculate, 60–90 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole lanceolate or elliptic, 5–7 cm long, scariosus or herbaceous. Racemes 2, paired, 3.5–5 cm long. Rhachis
fragile at the nodes, glabrous on surface or pubescent on surface, pubescent on margins (sparingly). Rhachis internodes oblong. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, pubescent (sparingly), tip lobed (bilobed).

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 4–4.5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, 7–11 -veined, glabrous or pubescent, acute, muticous or mucronate. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, chartaceous, 2-keeled, keeled laterally. Lower glume intercarinal veins distinct. Lower glume surface flat or with a longitudinal median groove, glabrous or pubescent, hairy in lines (along midline). Upper glume lanceolate, chartaceous, 1-keeled, 3 -veined. Upper glume muticous.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma oblong, hyaline, without keel, 1–3 -veined, 0–3 - veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea oblong.

**Flower and Fruit.** Anthers 3, 3 mm long.


**TYPE** from Senegal. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: IT: Gay s.n., Senegal (K).

**Illustrations (Books):** R.M.Polhill, F.T.E.A., Gramineae (3(1982):769, Fig. 180), G.V.Pope et al., Flora Zambesiaca 10, L.K.A. Chippindall, Grasses and Pastures of South Africa (1955) (499, Fig. 402 as var. squamulatus), M.A.N.Muller, Grasses of South West Africa/Namibia (1984) (as var. polycladus), S.A.Renvoize, The Grasses of Bahia, 1984 (280, Fig. 107), R.Pilger, Die Naturlichen Pflanzenfamilien 14e (1940) (170, Fig. 89 & 90).

**Illustrations (Journals):** Revista Brasil. Bot. (29: 296, Fig.13 (2006)).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 150–250 cm long. Ligule an eciliate membrane. Collar without external ligule or with external ligule. Leaf-blade base tapering to the midrib, without a false petiole or with a false petiole. Leaf-blades 30–60 cm long, 4–20 mm wide.

**Inflorescence.** Synflorescence compound, paniculate, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole lanceolate, 6–8 cm long, herbaceous. Racemes 2, paired, 4–9 cm long. Rhachis fragil at the nodes, glabrous on surface, ciliate on margins. Rhachis internodes cuneate. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, 4–5 mm long, ciliate, tip lobed.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, elliptic, dorsally compressed, 5–8 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, glabrous or pubescent or
villous, acute, awned, one glume awned or both glumes awned, with 1–10 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 5–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 1 mm long, pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, 2-keeled, keeled laterally. Lower glume intercarinal veins distinct. Lower glume surface flat or with a longitudinal median groove, glabrous. Upper glume lanceolate, chartaceous, 1-keeled. Upper glume muticous or mucronate.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–30 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** $2n = 40$ (1 ref TROPICOS).

**Distribution (TDWG). Continent.** Africa, Tropical Asia, Australasia (*), North America, South America (*).


T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database: T: Cultivated in France.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or short. Culms 80–200 cm long. Lateral branches sparse. Ligule a ciliolate membrane. Leaf-blades 5–10 mm wide, mid-green or glauescent. Leaf-blade surface glabrous or hirsute. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence composed of racemes, terminal. Racemes 2–7, paired or digitate, 4–11 cm long. Rhachis fragile at the nodes, glabrous on surface, pubescent on margins or ciliate on margins. Rhachis hairs 0.5–4 mm long. Rhachis internodes linear. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, pubescent or ciliate, with 0.5–4 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, elliptic, 7–11 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.
Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 7–11 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, muticous or awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 0–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

2n = 60, or 70, or 80, or 90 (4 refs TROPICOS).


Region. Southwestern Europe.


Illustrations (Journals): Ruizia (13:442 Fig 59g (1993)).

Derivation (Clifford & Bostock 2007): L. glaucesco, become glaucous. Foliage and/or other parts bluish-green.


Inflorescence. Synflorescence compound, linear.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 4.5 cm long. Racemes 2–3, paired or digitate, 4–5.5 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs 4 mm long. Rhachis internodes linear, 3.5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 5 mm long, villous, with 4 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 5–6 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia, Ecuador, Peru.


Illustrations (Books): B.Rosengurtt, Gramineas UruguayasI (1970) (166, Fig. 65).

Illustrations (Journals): Revista Brasil. Bot. (29: 297, Fig.14–15 (2006)).

Derivation (Clifford & Bostock 2007): Gk. glaukos, bluish-green; phyllon, leaf. Leaf-blades glaucous.


Inflorescence. Inflorescence composed of racemes, subtended by a spatheole. Spatheole lanceolate, 10–18 cm long. Racemes 2–6, digitate, 3–12 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 1.6–2.8 mm long. Rhachis internodes clavate, 0.8 length of fertile spikelet. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, 0.6 length of fertile spikelet, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, 4.2–5.8 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticus.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.5–7.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted. Spikelet callus hairs 0.8–1.3 mm long.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, ciliate on margins. Fertile lemma lanceolate, 3.2–5 mm long, hyaline, without keel, 2–3 -veined, 0–3 -veined. Lemma margins ciliate. Lemma apex entire (when aawnless) or dentate, 2 -fid, muticus or awned, 1 -awned. Principal lemmaawn from a sinus, geniculate, 0–5.5 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous.

Flower and Fruit. Anthers 2–3.5 mm long. Caryopsis 2.2–4 mm long, dark brown.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil Southeast. Uruguay.


**Type** from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: IT: A.F.M. Glaziou 11672, no date, Brazil: Rio de Janeiro (US-75522 (fragm. ex B)).

**Illustrations (Journals):** Revista Brasil. Bot. (29: 297, Fig.16–17 (2006)).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Inflorescence.** Synflorescence compound, linear, 20–50 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, enclosed. Spatheole lanceolate, 2.5–3 cm long. Racemes 2, paired, 2 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs on upper part of internode, 4 mm long. Rhachis internodes linear, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, villous, hairy above, with 4 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, linear, 4 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9–10 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3. 

n = 30 (1 ref TROPICOS).

**Distribution (TDWG).** Continent: South America.


**Type** from USA. Basionym or Replaced Name: Cinna glomerata Walt., Fl. Carol. 59 (1788). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Walter s.n., USA: South Carolina (BM; IT: GH (fragm. ex BM & photo), NY (fragm.).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.
Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations flabellate. Culms erect, 75–150 cm long. Leaf-sheaths keeled, glabrous on surface, outer margin glabrous or hairy. Ligule a ciliolate membrane. Leaf-blades 2.5–6 mm wide.

Inflorescence. Synflorescence compound, paniculate (oblong), dense.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spathoele lanceolate, 1.5–3 cm long. Peduncle 0.5–1 cm long, hirsute above. Racemes 2, paired, sinuous, 1.5–3 cm long. Rhachis fragile at the nodes, plumose on surface, plumose on margins. Rhachis internodes filiform. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, curved, plumose.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3–4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 10–20 mm long overall. Palea absent or minute.

Flower and Fruit. Anthers 3. $n = 10$ (3 refs TROPICOS).


Andropogon gracilis Spreng. Syst. 1: 284. (1825).


Recent Synonyms: Schizachyrium gracile (Spreng.) Nash, Small, Fl. S. E. U. S. 60 (1903).


Derivation (Clifford & Bostock 2007): L. slender. Culms or inflorescences slender.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–80 cm long, wiry. Ligule an eciliate membrane. Leaf-blades filiform, terete, 4–30 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, sinuous, 2–5 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 2–3 mm long. Rhachis internodes cuneate, 3–4 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets
spreading, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, curved, 3–4 mm long, plumose, with 2–3 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, linear or lanceolate, 2–3 mm long, shorter than fertile, deciduous with the fertile. Companion sterile spikelet glumes membranous, acute, awned, with 1–1.5 mm long awn.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, 3.5–5.5 mm long, falling entire, decicuous with accessory branch structures. Spikelet callus bearded, base obtuse, inserted. Spikelet callus hairs 2–3 mm long.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline, 2 -veined, acute. Fertile lemma oblong, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Distribution (TDWG).** Continent. North America, South America.


**Illustrations (Journals):** *Kew Bulletin* (50: 110, Fig.1 (1995)).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 5.5–10 mm long, shorter than fertile, persistent. Companion sterile spikelet glumes chartaceous, acute or acuminate, muticous. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, 6.5–11 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 1 mm long, pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or lanceolate, 1 length of spikelet, coriaceous, much thinner above, 2-keeled, keeled laterally, winged on keel, winged narrowly. Lower glume intercarinal veins distinct, 4–10 in number. Lower glume surface
convex or with a longitudinal median groove. Lower glume apex dentate, 2-fid, acute or acuminate. Upper glume lanceolate, chartaceous, 1-keeled, keeled above. Upper glume apex acuminate, awned, 1-awned, awn 0.5–4 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea.Lemma of lower sterile floret oblong, hyaline, 2-veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2-fid, incised 0.5 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 14–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0-veined, without keels.

**Distribution (TDWG).** Continent. Africa.


**TYPE** from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: USA, North Carolina.; *Ashe* 2034 (NCU holo).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–80 cm long. Ligule a ciliolate membrane. Leaf-blades flat or conduplicate, 3–4 mm wide.

**Inflorescence.** Synflorescence compound, fasciculate. Inflorescence composed of racemes, terminal and axillary, subtended by an inflated leaf-sheath or a spatheole, exserted or enclosed. Spatheole lanceolate. Peduncle flexuous, 1–15 cm long. Racemes 2, paired, 3–4 cm long. Rachis fragile at the nodes, plumose on surface, plumose on margins. Rachis internodes filiform, 8–10 mm long. Rachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 8–10 mm long, 1.4 length of fertile spikelet, plumose.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2-veined, ciliate on margins. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 10–15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 1.

n = 10 (2 refs TROPICOS).

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** North-central USA, South-central USA, Southeastern USA, Mexico. Illinois, Iowa, Missouri. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana,
Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Central Mexico, Gulf (Mexico), Northwest Mexico, Southeast Mexico. Mesoamerica, Caribbean. Belize, Honduras, Cuba.


TYPE from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: USA, Nebraska: Hall & Harbour 651.


Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 100–200 cm long. Lateral branches ample. Leaf-sheaths without keel, glabrous on surface. Ligule a ciliolate membrane, 2.5–4 mm long. Leaf-blades 5–10 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes, terminal or terminal and axillary. Racemes 2–4, paired or digitate, 4–6 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 2–4 mm long. Rhachis internodes clavate, 3–5 mm long. Rhachis internode tip transverse, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, 5–6 mm long, villous, with 2–4 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 9–10 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, acute, muticous. Companion sterile spikelet lemmas muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 9–10 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant pala. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 1–5 mm long overall.

Flower and Fruit. Anthers 3, 3–4 mm long.

2n = 60 (1 ref TROPICOS).


Illustrations: None found.
**Derivation** (Clifford & Bostock 2007): Gk *heteros*, different; *antheros*, blooming. Anthers of the sessile spikelets much smaller than those of the pedicelled.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial. Culms rambling, 60–120 cm long, wiry. Leaf-sheath auricles absent. Ligule an eciliate membrane. Leaf-blades lanceolate, tapering towards tip, 3–18 cm long, 3–8 mm wide. Leaf-blade apex acuminate.

**Inflorescence.** Synflorescence compound, linear.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Racemes 2(–3), paired, bilateral (as to sterile spikelets), 4–5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes clavate. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 5–5.5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous or mucronate. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5.5–6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet calyx pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9–12 mm long overall, with twisted column. Column of lemma awn glabrous.


**Derivation (Clifford & Bostock 2007):** L. -ense, denoting origin. From Huilla, Angola.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–200 cm long. Ligule an eciliate membrane. Leaf-blades conduplicate, 5–30 cm long, 2 –3 mm wide. Leaf-blade apex abruptly acute.

**Inflorescence.** Synflorescence compound, linear.

Inflorescence composed of racemes, terminal or terminal and axillary, subtended by a spatheole. Racemes 2–6, paired or digitate, sinuous, 2–6 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 2–16 mm long. Rhachis internodes filiform, 4–5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets ascending, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, curved, 4–5 mm long, plumose, with 2–6 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets rudimentary, linear or lanceolate, 0–2.5 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous or awned, one glume awned, with 0–3 mm long awn.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, 4–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or lanceolate, 1 length of spikelet, membranous, 2-keeled, keeled laterally. Lower glume intercarinal veins absent. Lower glume surface concave. Upper glume linear or lanceolate, membranous, 1-keeled. Upper glume muticus.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 0–2 -veined, without midvein, without lateral veins or obscurely veined, ciliate on margins. Fertile lemma lanceolate or oblong, hyaline, without keel. Lemma margins ciliolate. Lemma apex lobed, 2 -fid, incised 0.25–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, flexuous or geniculate, 8–20 mm long overall, without a column or with a straight or slightly twisted column. Column of lemma awn glabrous. Palea present or absent or minute, oblong.

**Flower and Fruit.** Anthers 3, 1.5 mm long. 

*n = 40 (1 ref TROPICOS). 

**Distribution (TDWG).** Continent. Africa.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online. 


**Illustrations:** None found. 


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae. 


**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 2–4, paired or digitate, 3–4.5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate. 

**Sterile Spikelets.** Basal sterile spikelets well-developed, 2–4 in number (on lowest raceme). 

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus square, 0.5 mm long, pubescent, base obtuse, inserted. 


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, ciliate on margins. Fertile lemma lanceolate, 3 mm long, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9–10 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3, 3 mm long. 

**Distribution (TDWG).** Continent. Africa.
Andropogon hypogynus  Hack. Mart. Fl. Bras. 2. 3: 290 (1883).


**Illustrations (Books):** S.A. Renvoize, Gramineas de Bolivia (1998) (586, Fig. 137), J.A. Steyermark et al, Flora of the Venezuelan Guayana Vol. 8 (2004) (23, Fig. 7).

**Illustrations (Journals):** Revista Brasil. Bot. (29: 297, Fig.18 (2006)).

**Derivation (Clifford & Bostock 2007):** Gk. hypo, below; gyne, woman.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial. Culms 100–150 cm long. Leaf-sheaths pubescent. Ligule an eciliate membrane. Leaf-blades 30–60 cm long, 4–5 mm wide. Leaf-blade surface pubescent.

**Inflorescence.** Inflorescence a panicle with branches tipped by a raceme or composed of racemes, terminal and axillary. Panicle axis 0–5 cm long. Racemes 6–15, digitate or borne along a central axis, 2–4 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 3 mm long. Rhachis internodes linear, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2.5 mm long, ciliate, with 3–4 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 5 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticus.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, 2 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous.

**Flowe and Fruit.** Anthers 3.

n = 30 (1 ref TROPICOS). 2n = 60 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica, Western South America, Brazil, Southern South America. Guatemala. Bolivia, Colombia. Brazil West Central, Brazil Southeast, Brazil South. Paraguay, Uruguay.


Accepted by: W.D. Clayton & K. Harman, GrassBase (2008) and online.

**Type** from Madagascar. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Madagascar, Mt. Ibity: Perrier 10768.

**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L. -ensis, denoting origin from Mt Ibity, Madagascar.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 60–70 cm long. Leaf-sheaths keeled. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blades 15–25 cm
long, 3–5 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Synflorescence simple.

Inflorescence composed of racemes. Racemes 4–9, digitate, 1.5–5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 4 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, acuminate. Companion sterile spikelet lemma enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma oblong, 3 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9–11 mm long overall, with twisted column. Column of lemma awn glabrous.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations (Books):** J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (269, Fig. 98).

**Derivation (Clifford & Bostock 2007):** L. -ensis, denoting origin. From Imerin, Madagascar.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, slender, 20–70 cm long, 2–3 -noded. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaves mostly basal. Ligule an eciliat e membrane, 0.2–0.5 mm long, truncate. Leaf-blades filiform, conduplicate, 5–25 cm long, 0.8–1.4 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex filiform.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–3, paired or digitate, 2–5 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs 1.5–2.5 mm long. Rhachis internodes filiform, 2.4–5.5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, villous.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 4–5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or oblong, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 4–4.5 mm long, hyaline, 0–3 -veined, without midvein or with evident midvein, without lateral veins or distinctly veined, ciliate on margins, fringed above. Fertile lemma lanceolate, 4 mm long, hyaline, without
keel, 1–3 -veined, 0–3 -veined. Lemma margins ciliolate. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 1 mm long.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Western Indian Ocean. Madagascar.


**Illustrations (Journals):** Revista Brasil. Bot. (29: 297, Fig.19 (2006)).


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 100–200 cm long. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 1.8–2 mm long. Leaf-blades 30–40 cm long, 10–15 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scabrous. Leaf-base apex acuminate.

**Inflorescence.** Synflorescence compound, linear, 30 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Racemes 2–3, paired or digitate, straight or arcuate, 2.5–8 cm long. Rhachis fragile at the nodes, scabrous on surface, glabrous on surface or pilose on surface, villous on margins. Rhachis internodes clavate, 3–5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 3–3.5 mm long.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, elliptic, 3.5–5 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous. Companion sterile spikelet lemmas enclosed by glumes, 3–3.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.5–5.5 mm long. falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 4 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma lanceolate, 3–3.5 mm long, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–15 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous. Palea 1.5 mm long, hyaline, 0 -veined.

**Flower and Fruit.** Lodicles 2, 0.5–0.8 mm long. Anthers 3, 2–2.2 mm long.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil North. Acre.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Guinea, Madina Tossekre: *Adam* 12528 (K holo).

**Illustrations:** None found.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Basal innovations flabellate. Culms erect, 250 cm long. Ligule a ciliate membrane. Leaf-blades flat or conduplicate, 10–25 cm long, 2–4 mm wide, stiff.

**Inflorescence.** Synflorescence compound, paniculate, 40–60 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spathocele linear, 1–1.5 cm long, herbaceous. Peduncle pubescent above. Racemes 1, single, 1 cm long. Rachis fragile at the nodes, subterete, ciliate on margins. Rachis internodes linear, 1–1.5 mm long. Rachis internode tip transverse, flat, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 1–1.5 mm long, ciliate, tip rectangular.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 4–5 mm long, longer than fertile, persistent. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.3 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 0.8 mm long, bearded, base truncate, attached transversely. Spikelet callus hairs 0.25 length of spikelet.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2 mm long, 0.5 length of spikelet, hyaline, 2 -veined. Fertile lemma linear, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.4 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 2 mm long.


**Illustrations (Journals):** *Novon* (13: 369 Fig 3 (2003) as var. *hirsutus*), *Revista Brasil. Bot.* (29: 297, Fig.20 (2006)).

**Derivation** (Clifford & Bostock 2007): L. disagreeable. The sharp callus enables the spikelets to catch on to clothing.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, slender, 70–100 cm long. Lateral branches sparse. Ligule an eciliate membrane. Leaf-blades 14 –35 cm long, 2–3 mm wide. Leaf-blade apex abruptly acute.


**Sterile Spikelets.** Companion sterile spikelets well-developed, containing empty lemmas, linear or lanceolate, 5 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, scabrous, glabrous, acute, muticous. Companion sterile spikelet lemmas 3.5 mm long.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, muticous or awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–12 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Northeast, Brazil Southeast.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. uncommon. The species is geographically restricted although locally abundant.


**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 25–50 cm long. Leaves mostly basal. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, 1 mm long. Leaf-blades 10–25 cm long, 1.5–2.5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous, tuberculate-ciliate, hairy at base.

**Inflorescence.** Synflorescence compound, linear, 6–10 cm long. Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, enclosed. Spathole lanceolate, 2–2.5 cm long. Racemes 2–4, paired or digitate, 1.5–2 cm long. Rhachis fragile at the nodes, pubescent on surface, ciliolate on margins. Rhachis internodes linear. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 1.7–2.2 mm long, ciliolate, with 1.5–3 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, 3–4.7 mm long, separately decidual. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–4.8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled laterally. Lower glume intercarinal veins absent. Lower glume surface flat or concave. Upper glume linear, coriaceous, 1-keeled. Upper glume muticous.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret linear, hyaline. Fertile lemma lanceolate, hyaline, without keel, 0 -veined, 0–3 -veined, without veins. Lemma apex entire, muticous.

**Flower and Fruit.** Anthers 3, 0.9–1.1 mm long.

**Distribution (TDWG).** Continent. South America.

**Illustrations:** None found.
**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online.

**Illustrations (Books):** J.Bosser, Graminees des Paturage et des Cultures a Madagascar (1969) (267, Fig. 97).

**Derivation (Clifford & Bostock 2007):** L. -ensis, denoting origin. From Pie d’Ivohibi, Madagascar.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–60 cm long. Lateral branches sparse. Leaf-sheaths keeled, glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long, truncate. Leaf-blades 20–30 cm long, 1.5–2 mm wide, stiff. Leaf-blade surface scabrous, rough on both sides, glabrous. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 3, digitate, 3.5–6 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs 2 mm long. Rhachis internodes linear, 2.5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2.5 mm long, villous.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute. Companion sterile spikelet lemmas dentate, 1-awned, with 3–4 mm long awn.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachillla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus square, 0.5 mm long, pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 5 mm long, hyaline, ciliate on margins. Fertile lemma lanceolate, 4.5 mm long, hyaline, without keel, 0–3 -veined. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–12 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Western Indian Ocean. Madagascar.


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online.
**TYPE** from Ivory Coast. T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database: Ivory Coast, Kongassso: Adjanohoun 388a (K holo, ABI).

**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L. -ensis, denoting origin. From Ivory Coast, in particular from Togo.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.
Habit, Vegetative Morphology. Perennial. Culms 150–200 cm long, 2–4 mm diam. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 40–70 cm long, 6–12 mm wide. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade margins scaberulous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes, terminal. Racemes 2, paired, unilateral (as to sterile spikelets), 9–11 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes columnar, 6 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets squeezed between internode and pedicel, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, 5 mm long, ciliate, tip widened.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 12 mm long, longer than fertile. Companion sterile spikelet glumes chartaceous, keeled, 19 -veined, acute, muticous. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus square, 1 mm long, pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 7 mm long, hyaline, 2 -veined, obtuse. Fertile lemma lanceolate, 4.5 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 40 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Lodicules 2, cuneate, 1 mm long, fleshy, truncate. Anthers 3, 3.4 mm long.


Country /Province /State. West Tropical Africa, West-Central Tropical Africa. Ivory Coast, Mali, Togo.


Sterile Spikelets. Companion sterile spikelets well-developed, male, linear, dorsally compressed, 3–4 mm long, shorter than fertile, deciduous with the fertile. Companion sterile spikelet glumes chartaceous, 6–7 -veined, glabrous, acuminate. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret linear, 4 mm long, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma margins ciliolate. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 14–16 mm long overall, with twisted column. Column of lemma awn 8–10 mm long, glabrous. Palea absent or minute.  

**Flower and Fruit.** Anthers 3, 2 mm long.  

**Distribution (TDWG).** Continent. Africa.  

**Country /Province /State.** Northeast Tropical Africa. Ethiopia (inc. Eritrea), Somalia. 


**Illustrations:** None found.  

**Derivation** (Clifford & Bostock 2007): L. *lacuna*, cavity; -osus, well developed. Lower glume pitted.  

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.  

**Habit, Vegetative Morphology.** Perennial. Culms rambling, 30–60 cm long, wiry. Ligule an eciliate membrane. Leaf-blades 8–15 cm long, 2–5 mm wide.  


**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 7–8 mm long, longer than fertile, persistent. Companion sterile spikelet glumes chartaceous, 3 -veined (raised), lacunose, glabrous, acuminate, muticous. Companion sterile spikelet lemmas enclosed by glumes.  

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus square or oblong, 0.7 mm long, pilose, base obtuse, inserted.  

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled laterally, winged on keel, winged narrowly. Lower glume intercarinal veins distinct. Lower glume surface convex or with a longitudinal median groove, lacunose (2 or more pits). Lower glume apex acuminate. Upper glume lanceolate, chartaceous, 1-keeled, keeled above. Upper glume awned, 1 -awned, awn 1–2 mm long.  

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–14 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0 -veined, without keels.  

**Distribution (TDWG).** Continent. Africa.  


**TYPE** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *F. Sellow s.n.*, no date, Brazil (B; IT: US-925158 (fragm.))


Illustrations (Journals): *Ruizia* (13:442 Fig 59f (1993)), *Revista Brasil. Bot.* (29: 297, Fig. 21 (2006)).

**Derivation** (Clifford & Bostock 2007): *laterus*, side; *-ale*, pertaining to. Inflorescence forming as a lateral shoot.


**Inflorescence.** Synflorescence compound, linear.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Racemes 2–6, digitate, 2.5–7.5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs on upper part of internode, 0.5–4 mm long. Rhachis internodes linear, 3.5–4 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate, with 0.5–4 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 4.5–8 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, 2–4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5.5–11 mm long overall, with a straight or slightly twisted column. Column of lemma awn 0.5–1.5 mm long, glabrous.

**Flower and Fruit.** Anthers 3, 0.5–1.3 mm long. Caryopsis 2.5 mm long.

*n = 30 (1 ref TROPICOS). 2n = 60 (2 refs TROPICOS).*

**Distribution (TDWG).** Continent: North America, South America.

**Country /Province /State.** Mesoamerica, Caribbean, Western South America, Brazil, Southern South America. Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama. Cuba. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): as for Paspalum lehmanniana.


Inflorescence. Synflorescence compound, paniculate.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 5–7 cm long. Racemes 2, paired, 4–6 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs 4 mm long. Rhachis internodes filiform, 3.5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 4 mm long, villous, with 4 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 6–7 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, 7 -veined, glabrous, acute, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, 4 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7–12 mm long overall, with twisted column. Column of lemma awn glabrous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country/Province/State. Western South America. Colombia.


Illustrations (Journals): Kew Bulletin (50: 110, Fig.1 (1995)).


Inflorescence. Inflorescence composed of racemes, terminal. Racemes 2–4, paired or digitate, 4–6 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs white. Rhachis internodes filiform or linear. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform or linear, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 4–7 mm long, shorter than fertile, persistent. Companion sterile spikelet glumes chartaceous, glabrous, acute or acuminate, muticous. Companion sterile spikelet lemmas enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 6.5–9


**Illustrations (Journals):** Ruizia (13:442 Fig 59d-e (1993)), Revista Brasil. Bot. (29: 297, Fig. 22 (2006)).

**Derivation** (Clifford & Bostock 2007): Gk. leukos, white; stachys, ear of corn. The spikelets are white and sometimes invested with copious white hairs.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 40–110 cm long, 0.7–2 mm diam. Culm-internodes solid. Culm-nodes glabrous. Lateral branches sparse. Leaves mostly basal. Leaf-sheaths keeled, glabrous on surface. Ligule a ciliolate membrane, 0.7–1.7 mm long. Leaf-blades flat or conduplicate, 15–32 cm long, 1.5–2.5 mm wide. Leaf-blade apex acuminate.

**Inflorescence.** Synflorescence compound, scanty. Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Racemes 2–4, paired or digitate, 2–5.5 cm long. Rhachis fragile at the nodes, plumose on surface, plumose on margins. Rhachis hairs lengthening towards internode tip, 5–10 mm long. Rhachis internodes linear, 1.8–2.7 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2.5–3.5 mm long, plumose, with 5–10 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, linear, 1.1–1.5 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 2–3.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, inserted. Spikelet callus hairs 4–5 mm long.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1.8–2.6 mm long, hyaline, 2 -veined, ciliate on margins, fringed above. Fertile lemma lanceolate, 1.5–2.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus square, 1 mm long, pubescent, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate or elliptic, 1 length of spikelet, herbaceous, much thinner above, 2-keeled, keeled laterally. Lower glume lateral veins ribbed, intercarinal veins distinct, intercarinal veins 5–7 in number. Lower glume surface convex or with a longitudinal median groove, scabrous. Lower glume apex dentate, 2 -fid. Upper glume lanceolate, chartaceous, 1-keeled. Upper glume apex acuminate, awned, 1 -awned, awn 1–1.5 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0 -veined.

mm long, hyaline, without keel. Lemma apex entire, acuminate, muticous or mucronate. Palea absent or minute.

**Flower and Fruit.** Anthers 3.

2n = 20 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Mexico. Gulf (Mexico), Southwest Mexico, Southeast Mexico.

Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Southern South America. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico, Trinidad-Tobago, French Guiana, Guyana, Surinam, Venezuela, Bolivia, Colombia, Ecuador, Peru, Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay, Uruguay.


**TYPE** from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Mexico, Chinantla: Liebmann 77 (C lecto, MICH, UC, US).


Derivation (Clifford & Bostock 2007): in honor of Frederik Michael Leibmann (1813–56), Danish botanist.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–100 cm long. Lateral branches sparse. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane, 0.5–1 mm long, brown. Leaf-blades 10–30 cm long, 2–6 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 4–5, digitate, 2–4 cm long, bearing 5–10 fertile spikelets on each. Rachis fragile at the nodes, plumose on margins. Rachis hairs 6–8 mm long. Rachis internodes filiform, 3 mm long. Rachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3–4 mm long, plumose, with 6–8 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas, linear, 1–2 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, acute.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.5–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Flower and Fruit.** Anthers 1.

n = 10 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America.

Country /Province /State. Southeastern USA, Mexico. Alabama, Georgia, Louisiana, North Carolina, South Carolina. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–100 cm long. Ligule an eciliate membrane, 1.5–3 mm long. Leaf-blades 10–25 cm long, 1–2 mm wide. Leaf-blade apex attenuate.

**Inflorescence.** Synflorescence simple or compound, scanty, open.

Inflorescence composed of racemes, terminal and axillary or terminal, subtended by a spatheole. Spatheole linear, 5–8 cm long. Racemes 2(–4), paired, sinuous, 4–9 cm long. Rhachis fragile at the nodes, villous on margins or plumose on margins. Rhachis hairs 2–5 mm long. Spikelet packing lax. Rhachis internodes filiform. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets ascending, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, curved, villous or plumose, with 2–5 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas or containing empty lemmas, lanceolate, dorsally compressed, 5–7 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, acute, muticous or awned, one glume awned, with 0–1 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5.5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1 mm long, pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, membranous, 2-keeled, keeled laterally. Lower glume intercarinal veins absent or obscure, 0–2 in number. Lower glume surface concave. Upper glume lanceolate, membranous, 1-keeled. Upper glume muticous or awned, awn 0–1 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.33–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea oblong.

**Distribution** (TDWG). Continent. Africa.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Butt sheaths glabrous. Culms 45–100 cm long. Ligule an eciliate membrane. Leaf-blades erect, 15–50 cm long, 2 mm wide, stiff. Leaf-blade midrib widened (0.33 width of blade). Leaf-blade surface scabrous. Leaf-blade margins scabrous.

Sterile Spikelets. Companion sterile spikelets well-developed, male, linear or lanceolate, dorsally compressed, 4.5–8 mm long, shorter than fertile, persistent. Companion sterile spikelet glumes chartaceous, glabrous, acute, awned, one glume awned, with 0.5–3 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 6.5–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1 mm long, pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5–0.6 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0 -veined, without keels.


Illustrations (Books): B. Rosengurtt, Gramineas Uruguayas (1970) (160, Fig. 62).

Illustrations (Journals): Revista Brasil. Bot. (29: 297, Fig.23 (2006)).


Inflorescence. Synflorescence compound, linear.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole lanceolate, 6.5–8 cm long. Racemes 2–3, paired or digitate, 2.5–7 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs 7–8 mm long. Rhachis internodes filiform, 0.66 length of fertile spikelet. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 0.75 length of fertile spikelet, villous, with 7–8 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 4.8–6 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.8–4.6 mm long.
falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted. Spikelet callus hairs 2.5 mm long.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, 1.6–2.8 mm long, hyaline, without keel, 1 -veined, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5.5–9 mm long overall, with a straight or slightly twisted column. Column of lemma awn 0.5–1.2 mm long, glabrous.

**Flower and Fruit.** Anthers 3, 0.8–0.9 mm long. Caryopsis 2.4 mm long, dark brown.

**Distribution (TDWG).** Continent. South America.


**Derivation** (Clifford & Bostock 2007): L. leaden. Spikelets grey or purple.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Basal innovations flabellate. Culms 25–90 cm long. Leaf-sheath auricles erect, 2–6 mm long. Ligule an eciliate membrane, 2–6 mm long. Leaf-blades erect, 7–20 cm long, 2–4 mm wide. Leaf-blade surface glabrous.


**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 6–7 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, acute, muticous. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 6–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 2-keeled, keeled laterally, winged on keel, winged narrowly, winged near apex. Lower glume intercarinal veins distinct, 3–7 in number. Lower glume surface flat or concave. Upper glume lanceolate, chartaceous, 1-keeled. Upper glume muticous.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9–13 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** n = 10 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Tropical Asia.

**Country/Province/State.** Indian Subcontinent. India, Sri Lanka. Tamilnadu.


Derivation (Clifford & Bostock 2007): L. longus, long; barba, beard.


Inflorescence. Synflorescence compound, paniculate.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, enclosed. Spatheole lanceolate, 3–5 cm long, brown. Racemes 2 (–4), paired, 3–4 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 8–10 mm long. Rhachis internodes linear, 2 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 4 mm long, plumose, with 8–10 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels or represented by single glumes, linear, 0–1 mm long, shorter than fertile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachhilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 12–16 mm long overall.

Flower and Fruit. Anthers 1.

n = 10 (1 ref TROPICOS).


Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. makros, large; phyllon, leaf. Leaf-blades large.


Inflorescence. Synflorescence compound, paniculate, 60–120 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole lanceolate, 6–10 cm long, scarios or herbaceous. Racemes 2, paired, 4–7 cm long. Rhachis fragile at the
nodes, glabrous on surface or pubescent on surface, ciliate on margins. Rhachis hairs 2 mm long. Rhachis internodes clavate, 4 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, 4 mm long, ciliate, tip lobed (bilobed).

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, oblong, dorsally compressed, 4–5 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, acute, mucronate. Companion sterile spikelet lemma 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 5 mm long, hyaline, 2 -veined, ciliate on margins. Fertile lemma oblong, hyaline, without keel, 1 -veined, 0–3 -veined. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9–16 mm long overall, with twisted column. Column of lemma awn glabrous. Palea oblong.

**Flower and Fruit.** Anthers 3, 4–5 mm long.


Illustrations (Journals): *Revista Brasil. Bot.* (29: 297, Fig.24 & 298, Fig.25 (2006)).

**Derivation** (Clifford & Bostock 2007): Gk. makros, large; thrix, hair. Pedicels bearing long hairs.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Flower and Fruit.** n = 30 (1 ref TROPICOS). 2n = 20 (2 refs TROPICOS).

**Distribution (TDWG).** Continent. South America. Country /Province /State. Western South America, Brazil, Southern South America. Bolivia. Brazil West Central, Brazil Southeast, Brazil South. Paraguay, Uruguay.


**TYPE** from Fernando Po. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Fernando Po: Mann 1475 (K syn);.

Illustrations: None found.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Inflorescence.** Inflorescence composed of racemes, terminal. Racemes (2–)3–10, digitate, 2–7 cm long. Central inflorescence axis 0–3 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs white, 0.5–1 mm long. Rhachis internodes filiform or linear, 3–5 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform or linear, 3–5 mm long, ciliate, with white hairs, with 0.5–1 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 5–8 mm long, as long as fertile, persistent. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticious or mucronate. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower spikelet male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.5–8 mm long, falling entire, decidual with accessory branch structures. Spikelet callus square, 0.5 mm long, pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, cartilaginous, purple, 2-keeled, keeled laterally. Lower glume intercarinal veins absent or obscure, 0–4(–7) in number. Lower glume surface flat or concave, glabrous. Lower glume apex dentate, 2-fid. Upper glume lanceolate, chartaceous, 1-keeled, keeled above. Upper glume muticious or awned, 1-awned, awn 0.5–5 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2-veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2-fid, incised 0.25–0.5 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 4–14 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0-veined, without keels.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Brasilia: Reserva Ecológica do IBGE, 4 Aug 1979, *E.P. Heringer et al. 1716*, Brazil (Bahia, Distrito Federal) HT: IBGE; IT: CEN, ICN, SP, UEC

**Illustrations (Journals):** *Novon* (13: 371 Fig 2 (2003)), *Revista Brasil. Bot.* (29: 298, Fig.298 (2006)).

**Derivation** (Clifford & Bostock 2007): Gk monos, one; klados, a shoot. Culms with a solitary branch at each node.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 170–250 cm long, 9–10-noded. Culm-internodes distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, hirsute. Ligule a ciliolate membrane, 1–1.2 mm long, truncate. Leaf-blades 22–70 cm long, 5–7 mm wide. Leaf-blade surface glabrous or hirsute, hairy on both sides. Leaf-blade margins scabrous. Leaf-blade apex abruptly acute or acute.

**Inflorescence.** Synflorescence compound, linear. Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 3.5–7 cm long. Peduncle 1.5–6.5 cm long. Racemes 1, single, 2.5–5 cm long. Rhachis fragile at the nodes,
ciliate on margins. Rhachis internodes linear, 2.2–3.5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2.2–3.5 mm long, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 3–5.5 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachillula extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.5–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3–4 mm long, hyaline, 2–3 -veined, ciliate on margins, fringed above. Fertile lemma lanceolate, 3–3.5 mm long, hyaline, without keel, 1–3 -veined, 0–3 -veined, one-veined or several-veined. Lemma apex lobed, 2 -fid, incised 0.2–0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–9 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous. Palea 0.8–1.2 mm long, hyaline, 0 -veined, without keels. Palea apex erose.

**Flower and Fruit.** Lodicles 2, 0.8 mm long. Anthers 3, 0.6–1 mm long, yellow. Caryopsis 2–5 mm long.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil West Central. Distrito Federal, Goiás. Bahia.


**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (589, Fig. 138).

**Illustrations (Journals):** *Revista Brasil. Bot.* (29: 298, Fig.28 (2006)).

**Derivation** (Clifford & Bostock 2007): *L. multus*, many; *flos*, flower. Spikelets with more florets than those of related species.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations flabellate. Culms erect, 160–190 cm long. Ligule an eciliate membrane. Leaf-blades flat or conduplicate, 28–30 cm long, 1.5–4 mm wide. Leaf-blade apex acute.

**Inflorescence.** Synflorescence compound, linear, 50 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Racemes 2–6, paired or digiterate, 2.5–5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, 3–4 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachillula extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex muticous.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State.** Western South America. Bolivia, Colombia.


**Illustrations (Books):** H.J.Noltie, *The Grasses of Bhutan* (2000) (807, Fig. 806 as *Cymbopogon*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 874).

**Derivation** (Clifford & Bostock 2007): in honor of William Munro (1818–1880) Scots-born British soldier and amateur botanist who collected extensively in India.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–150 cm long. Ligule an eciliate membrane. Leaf-blades 15–30 cm long, 3–7 mm wide. Leaf-blade surface glabrous or pubescent.

**Inflorescence.** Inflorescence composed of racemes, terminal or terminal and axillary. Racemes 2–4(–8), digitate, 2.5–7.5 cm long. Central inflorescence axis 0.3–1.5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear. Rhachis internode tip transverse, crateriform, with lobed rim. Raceme-bases brief or filiform, 4–8 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, elliptic or oblong, dorsally compressed, 4.5–6.5 mm long, as long as fertile, persistent. Companion sterile spikelet glumes chartaceous, muticous. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 4.5–6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic or oblong, 1 length of spikelet, coriaceous, 2-keeled, keeled dorsally or laterally. Lower glume intercarinal veins absent. Lower glume surface concave. Upper glume lanceolate, chartaceous, 1-keeled.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–15 mm long overall, with twisted column. Column of lemma awn glabrous.

**Distribution (TDWG). Continent.** Temperate Asia, Tropical Asia.

**Country /Province /State.** China South Central, Tibet. **Indian Subcontinent.** Assam, Eastern Himalaya, India, Nepal, Pakistan, West Himalaya.


**TYPE** from Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: C. Wright 3899, 1865, Cuba (US-35320; IT: NY-71015 (possible)).

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, culms solitary or caespitose. Culms 30–45 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane. Leaf-blades 1–4 cm long, 1 mm wide.
Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, 3–4 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 5–7 mm long. Rhachis internodes clavate, 2–3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2–3 mm long, plumose, with 5–7 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by single glumes, linear, 1–2 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3–3.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma lanceolate, hyaline, without keel, 1 -veined, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 10–15 mm long overall.

Flower and Fruit. Anthers 1.

Distribution (TDWG). Continent. South America.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *per*, very; *dignus*, worthy. Worthy of recognition on several counts and especially the height of the culms.


Inflorescence. Synflorescence compound, linear, 25–35 cm long, open.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole lanceolate, 2–4 cm long. Racemes 1, single, 2–4 cm long. Rhachis fragil at the nodes, scabrous on surface, villous on margins. Rhachis internodes clavate, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, villous, hairy on margins.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 2.5–3 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2-keeled, ciliolate on margins. Fertile lemma lanceolate, 3–3.7 mm long, hyaline, without keel, 0–
3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–
20 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous. Palea 2.5–
3 mm long, hyaline, 2 -veined, 2-keeled.

**Flower and Fruit.** Lodicules 2, 0.5–0.7 mm long. Anthers 3, 1.5 mm long.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America. Venezuela.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World

**TYPE** from Togo. T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database: Togo,
Misahoho: *Baumann 318* (K:holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *per*, very; *ligulus*, tongue; -atus, possessing. Ligule
prominent.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–150 cm long. Leaf-sheath oral
hairs lacking. Leaf-sheath auricles erect, 3–12 mm long. Ligule an eciliate membrane. Leaf-blades 10–40
cm long, 1–5 mm wide.

**Inflorescence.** Synflorescence simple or compound, linear.

Inflorescence composed of racemes, terminal or terminal and axillary, subtended by an unspecialized
leaf-sheath or a spatheole. Racemes 2, paired, bilateral (as to sterile spikelets), 3–8 cm long. Rhachis fragile
at the nodes, ciliate on margins. Rhachis internodes cuneate. Rhachis internode tip transverse, crateriform,
with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile
spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed,
3.5–6 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, scaberulous, glabrous,
acute, muticous or mucronate. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla
extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4–6 mm long,
falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear,
1 length of spikelet, coriaceous, 2-keeled, keeled dorsally. Lower glume surface deeply depressed. Upper
glume linear, chartaceous, 1-keeled. Upper glume muticous or awned, 1 -awned, awn 0–3 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong,
hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.5 of
lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–20 mm long overall,
with twisted column. Column of lemma awn glabrous.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** West Tropical Africa, West-Central Tropical Africa, Northeast
Tropical Africa, East Tropical Africa, South Tropical Africa. Benin, Burkina, Ghana, Ivory Coast, Mali,
Nigeria, Senegal, Sierra Leone, Togo. Central African Republic, DRC. Ethiopia (inc. Eritrea). Kenya,


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World

**TYPE** from Senegal. T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database:

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *pinguis*, fatty; *pes*, foot. Pedicels clavate and glossy on the
back.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.
**Habit, Vegetative Morphology.** Annual. Culms 30–150 cm long. Leaf-sheath auricles absent or erect, 0–3 mm long. Ligule a ciliolate membrane. Leaf-blade base tapering to the midrib. Leaf-blades 10–20 cm long, 3–5 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

**Inflorescence.** Synflorescence compound, linear, 15–30 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatho...s, 2–paired, 2–4.5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes oblong. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, inflated, 4 mm long, ciliate, tip lobed (bilobed).

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, elliptic, dorsally compressed, 6–6.5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, glabrous or pubescent, acute, awned, one glume awned, with 1–4 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, chartaceous, 2-keeled, keeled laterally. Lower glume intercarinal veins distinct, 7–8 in number. Lower glume surface flat or with a longitudinal median groove. Lower glume apex obtuse. Upper glume lanceolate, chartaceous, 1-keeled, 3 -veined. Upper glume margins ciliate. Upper glume muticous.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma oblong, 3.5 mm long, hyaline, without keel. Lemma margins ciliate. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–22 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3, 3.5 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** West Tropical Africa, West-Central Tropical Africa. Senegal.

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**Illustrations:** None found.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia.

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**TYPE from Brazil.** T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: T: J.B.E. Pohl 1541, no date, Brazil: Goias (US-75615).

**Illustrations (Journals):** *Revista Brasil. Bot.* (29; 298, Fig.30 (2006)).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial. Culms 100–150 cm long. Ligule an eciliate membrane. Leaf-blades lanceolate, 10–15 cm long, 5–16 mm wide.

**Inflorescence.** Synflorescence compound, scanty.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatho...m, 2–3 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 2–3 mm
long. Rhachis internodes cuneate, 5 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, 4 mm long, ciliate, with 2–3 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 7–8 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, 4–5 mm long, hyaline, without keel. Lemma apex lobed, 2-fid, incised 0.33–0.5 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 15–18 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Brazil. Brazil West Central.
Mato Grosso, Goiás. Mato Grosso, Goiás.


**TYPE** from Sri Lanka. T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: Ceylon.*

**Illustrations (Books):** N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (92, Fig. 1 as *A. polyptychus*).

**Derivation** (Clifford & Bostock 2007): Gk. polys, several; ptyx, fold. Origin uncertain.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate or elliptic, dorsally compressed, 6–7 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, acute, muticous. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 6–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2-veined. Fertile lemma linear, hyaline, without keel. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 9–17 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** $2n=20$ (1 ref TROPICOS).


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short, woody. Culms 100–120 cm long. Lateral branches sparse. Leaf-sheaths pilose. Ligule an eciliate membrane, 1 mm long. Leaf-blades involute, 20–25 cm long, 3 mm wide. Leaf-blade surface pubescent, hairy adaxially.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Racemes 2, paired, 3–6 cm long, bearing 5–10 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 3 mm long. Rhachis internodes linear, 5–6 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 5–6 mm long, ciliate, with 3 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas, linear, 2.5–6 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, acute.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 8–12 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Central Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico.


**TYPE** from Nigeria. T:*Type of Basionym*: *fide* TROPICOS and Kew Synonomy Database: HT: Barter 936, Nigeria (K).


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms geniculately ascending, 50–150 cm long. Ligule an eciliate membrane. Leaf-blades 8–40 cm long, 1–5 mm wide. Leaf-blade surface glabrous.
Inflorescence. Synflorescence compound.
Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, exserted or embraced at base by subtending leaf. Spatheole linear or lanceolate, 5 cm long. Racemes 2, paired, 2–4 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes oblong or cuneate. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, oblong or cuneate, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas or male, elliptic, dorsally compressed, 4–5 mm long, shorter than fertile. Companion sterile spikelet glumes membranous, glabrous to villous, acute, awned, both glumes awned, with 5–11 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, laterally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Flower and Fruit. n = 20 (1 ref TROPICOS).


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations (Journals): Hooker's Icones Plantarum (t.3644 (1967)).


Habit, Vegetative Morphology. Perennial. Culms 150–200 cm long, 5–6 -noded. Ligule an eciliate membrane, 1–2 mm long. Leaf-blade base with a false petiole. Leaf-blades 15–25 cm long, 2–8 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade apex attenuate, filiform.

Inflorescence. Synflorescence compound, paniculate, 30–40 cm long, lax.

Inflorescence composed of racemes, terminal, subtended by a spatheole. Racemes 2, paired, 4–6 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes clavate, 8 mm long. Rhachis internode tip oblique, crateriform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, ciliate, tip lobed (bilobed).

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 8–10 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, acute, awned, both glumes awned, with 6–13 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acuminate, 11–13 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 2 mm long, pilose, base obtuse, inserted.
Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled laterally, winged on keel, winged all along. Lower glume intercarinal veins distinct, 10 in number. Lower glume surface flat or with a longitudinal median groove. Lower glume apex dentate, 2 -fid, awned, 2 -awned, awn 1–3 mm long. Upper glume lanceolate, chartaceous, 1-keeled, winged on keel, 3 -veined. Upper glume margins ciliate. Upper glume awned, 1 -awned, awn 6 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 9 mm long, hyaline, 3 -veined, ciliate on margins. Fertile lemma lanceolate, 7 mm long, hyaline, without keel. Lemma margins ciliate. Lemma apex awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 30–40 mm long overall, with twisted column. Column of lemma awn glabrous. Palea elliptic, 0.75 length of lemma.

Flower and Fruit. Lodicules 2, cuneate, 1 mm long, fleshy, truncate.


Andropogon pumilus Roxb. Fl. Ind. 1: 277. (1820).


Inflorescence. Synflorescence compound, paniculate, 4–10 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 0.5–2 cm long. Racemes 2, paired, deflexed, 1.3–2 cm long. Rhachis tough, deciduous from axis, ciliate on margins. Rhachis internodes cuneate, 2.5 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Raceme-bases flattened, subequal, 1 mm long, shortly lobed (4-lobed), persistent. Spikelets squeezed between internode and pedicel, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, oblong, 2.5 mm long, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, dorsally compressed, 3–3.5 mm long, shorter than fertile, persistent. Companion sterile spikelet glumes chartaceous, keeled, 5 -veined, acute, muticous. Companion sterile spikelet lemmas enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret linear, 3 mm long, hyaline, 2 -veined. Fertile lemma linear, hyaline, without keel. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–16 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0 -veined, without keels.

Flower and Fruit. Anthers 3, 2 mm long.


Illustrations (Journals): Kew Bulletin (50: 110, Fig.1 (1995)).

Derivation (Clifford & Bostock 2007): callus pungent.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–125 cm long. Ligule an eciliate membrane. Leaf-blades flat, 6.5–20 cm long, 1–5.5 mm wide.

Inflorescence. Synflorescence compound, scanty.


Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 5–7 mm long, as long as fertile, persistent. Companion sterile spikelet glumes chartaceous, glabrous, ciliate on margins, acute or acuminate, awned, both glumes awned, with 1.5–4 mm long awn. Companion sterile spikelet lemma enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, dorsally compressed, 5–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus linear, 2–3.5 mm long, pilose, base pungent, inserted.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

Type: from Cameroon. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Cameroun, Cameroon Mt.: Mann 2097 (K holo).

Illustrations: None found.


Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms geniculately ascending or decumbent, 5–15 cm long. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades 2–3 cm long, 2–3 mm wide. Leaf-blade surface hirsute. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole lanceolate, 3–4 cm long. Racemes 2, paired, deflexed, 2.5–5 cm long, bearing few fertile spikelets, bearing 2–4 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform, 3 mm long. Rhachis internode tip transverse, flat, with simple rim. Raceme-bases linear, subequal, 1 mm long, pilose, hairy in axils, persistent. Spikelets
appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, ciliate.

**Sterile Spikelets.** Basal sterile spikelets well-developed, 2 in number (lower raceme), 0 in upper racemes.

Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas or containing empty lemmas, lanceolate, dorsally compressed, 7–8 mm long, longer than fertile, persistent. Companion sterile spikelet glumes chartaceous, keeled, without depressions or pitted (2 pits), dentate, 2 -fid, acute, awned, one glume awned, with 6–8 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, attached transversely. Spikelet callus hairs 1–2 mm long.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, chartaceous or herbaceous, 2-keeled, keeled above, keeled laterally. Lower glume primary vein scabrous. Lower glume intercarinal veins distinct, 4–6 in number. Lower glume surface convex or with a longitudinal median groove, pitted (2 pits). Lower glume apex dentate, 2 -fid. Upper glume oblong, chartaceous, 1-keeled, keeled above, 3 -veined. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 3–6 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 35–45 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Distribution (TDWG).** Continent. Africa.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–80 cm long. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, 1 mm long. Leaf-blades flat or conduplicate, 10–35 cm long, 2.5–5 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Synflorescence compound, scandy. Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole linear, 4–5 cm long. Peduncle 3–5 cm long. Racemes 2, paired, 2–4 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 4–5 mm long. Rhachis internodes filiform, 2.5–3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 2.5–3 mm long, plumose, with 4–5 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, awned, 1 -
awned. Principal lemma awn from a sinus, curved or geniculate, 7–8 mm long overall, with a straight or slightly twisted column. Column of lemma awn glabrous.

**Distribution (TDWG). Continent.** South America.
**Country /Province /State.** Caribbean. Bahamas, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -anus, indicating location. From Serania de San Lorenzo, Department of Santa Cruz, Bolivia.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations flabellate. Culms erect, 30 cm long. Leaf-sheaths keeled. Ligule an eciliate membrane. Leaf-blades flat or conduplicate, 6–13 cm long, 2–3 mm wide. Leaf-blade apex acute.


**Sterile Spikelets.** Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, 5.5–6 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acuminate, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 1.5 mm long overall.

**Distribution (TDWG).** South America.
**Country /Province /State.** Western South America. Bolivia.


**Illustrations (Books):** G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 196, Fig. 23 (2006)).


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 70–80 cm long. Lateral branches sparse. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, 1 mm long. Leaf-blades 18–20 cm long, 4–5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2, paired, 3–5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 2 mm long. Rhachis internodes clavate, 4 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the
cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, 3 mm long, ciliate, with 2 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 7 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, mucronate or awned, one glume awned, with 0.5–1 mm long awn.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–18 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country/Province/State.** Western South America. Ecuador.


**Derivation (Clifford & Bostock 2007):** L. -ensis, denoting origin. From Schire Highlands, Ethiopia.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths withering or persistent and investing base of culm, with fibrous dead sheaths. Culms 40–250 cm long. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades flat or convolute, 9–70 cm long, 2–12 mm wide.

**Inflorescence.** Inflorescence composed of racemes, terminal. Racemes 2, paired, unilateral (as to sterile spikelets), 5–25 cm long. Rhachis fragile at the nodes, semiterete, ciliate on margins. Rhachis hairs 1–3 mm long. Rhachis internodes cuneate, 4–5 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets squeezed between internode and pedicel, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, cuneate, semiterete, ciliate.

**Sterile Spikelets.** Basal sterile spikelets well-developed, 2 in number, barren, smaller than fertile. Basal sterile spikelet lemmas aawnless.

Companion sterile spikelets well-developed, male, elliptic, dorsally compressed, 5–10 mm long, longer than fertile, persistent. Companion sterile spikelet glumes coriaceous, 13–15 -veined, acute, muticous. Companion sterile spikelet lemmas encosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, laterally compressed, 4.5–10 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1–2 mm long, pilose, base obtuse, inserted.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled dorsally. Lower glume intercarinal veins...

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 4 mm long, hyaline, 2 -veined. Fertile lemma oblong, 4 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned. 1 -awned. Principal lemma awn from a sinus, geniculate, 20–40 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 0 -veined, without keels.

Flower and Fruit. n = 10 (1 ref TROPICOS). 2n = 20 (1 ref TROPICOS).


Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, Flora Argentina 3 – 1, Aristidoideae a Pharoideae (2012) (499), S.A.Renvoize, Gramineas de Bolivia (1998) (592, Fig. 140), S.A.Renvoize, The Grasses of Bahia, 1984 (276, Fig. 104), L.B. Smith, D.C. Wasshausen, R.M. Klein Flora Illustrada Catarinensis Gramineas (1981–1982) (1285, Fig. 251 & 254), A.Burkat, Flora Ilustrada de Entre Rios (Argentina), Pt II, Gramineas (1969) (501, Fig. 211), B.Rosengurtt, Gramineas UruguayasI (1970) (164, Fig. 64), E.Hafliger & E.Schultz, Grass Weeds, CIBA-GEIGY (1:6(1980)).

Illustrations (Journals): Revista Brasil. Bot. (29: 298, Fig.31 (2006)).


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–110 cm long, 2–3.5 mm diam. Culm-internodes solid. Culm-nodes glabrous. Lateral branches sparse. Leaves mostly basal. Leaf-sheaths keeled, glabrous on surface. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades flat or conduplicate, 20–40 cm long, 3–5 mm wide. Leaf-blade midrib keeled beneath. Leaf-blade apex obtuse, hooded.

Inflorescence. Synflorescence compound, scanty.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Peduncle pilose above. Racemes 3–5, digitate, 3–6 cm long. Rhachis fragle at the nodes, plumose on surface, plumose on margins. Rhachis hairs lengthening towards internode tip, 5–10 mm long. Rhachis internodes linear, 2–2.8 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 3.5–3.8 mm long, plumose, with 5–10 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by single glumes, linear, 0.6–1.2 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.5–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, inserted. Spikelet callus hairs 4–5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 2–2.5 mm long, hyaline, 2 -veined, ciliate on margins, fringed above. Fertile lemma lanceolate, 1.5–2 mm long, hyaline, without keel. Lemma apex entire, acuminate, muticous or mucronate. Palea absent or minute.

Flower and Fruit. Anthers 3, 0.6 mm long. Caryopsis linear, 1.7 mm long.

\[ n = 10 \] (1 ref TROPICOS). \[ 2n = 20 \] (3 refs TROPICOS).


Country /Province /State. Mexico. Gulf (Mexico), Southwest Mexico, Southeast Mexico.
Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Belize, Costa Rica, El Salvador, Honduras, Nicaragua, Panama. Cuba, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.


Illustrations (Books): S.A.Renvoize, The Grasses of Bahia, 1984 (277, Fig. 105).

Derivation (Clifford & Bostock 2007): L. -anum, indicating location. From Serra do Sincora, Brazil.


Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas, linear or lanceolate, 5 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, scaberulous, glabrous, acute, muticous. Companion sterile spikelet lemmas 3.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, muticous or awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–12 mm long overall, with twisted column. Column of lemma awn glabrous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.


**Illustrations:** None found.


**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 200–300 cm long, without nodal roots or with prop roots. Ligule an eciliate membrane or a ciliolate membrane, 1–2 mm long. Leaf-blade base tapering to the midrib, with a false petiole. Leaf-blades lanceolate, 30–45 cm long, 10–25 mm wide, flaccid, light green. Leaf-blade apex acuminate.

**Inflorescence.** Synflorescence compound, paniculate, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole lanceolate, 4–7 cm long, membranous or herbaceous. Racemes 2, paired, 3–4 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 2–3 mm long. Rhachis internodes linear, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 3 mm long, ciliate, tip lobed (bilobed).

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, oblong, dorsally compressed, 4–5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, acute, mucronate or awned, both glumes awned, with 0.5–1.5 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted. Spikelet callus hairs 1–1.5 mm long.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3 mm long, hyaline, 2 -veined, ciliate on margins. Fertile lemma linear, 3 mm long, hyaline, without keel. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 0.33 length of lemma.

**Flower and Fruit.** Anthers 3, 2 mm long.

2n = 20 (2 refs TROPICOS), or 30 (3 refs TROPICOS).

**Distribution (TDWG).** Continent. Africa.


**TYPE** from Sudan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: Schweinfurth 2600, Sudan: Sreiba Ghatta (W; IT: K).

**Illustrations:** None found.


**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations flabellate. Culms 100–250 cm long. Ligule a ciliolate membrane. Leaf-blades revolute, 30–60 cm long, 2–3 mm wide, stiff. Leaf-blade margins spinulose.

**Inflorescence.** Synflorescence compound, paniculate, lax.
Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 6–8 cm long. Racemes 5–40, digitate, straight or sinuous, 3–12 cm long. Rhachis fragile at the nodes, glabrous on margins or ciliate on margins. Rhachis hairs 0–2 mm long. Rhachis internodes filiform. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets ascending, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, straight or curved, glabrous or ciliate, with 0–2 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 3–5.5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, acute, muticous. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, 4–5.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 4 mm long, hyaline, 2-veined, ciliate on margins. Fertile lemma oblong, hyaline, without keel. Lemma apex lobed, 2-fid, incised 0.25–0.5 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 5–12 mm long overall, with twisted column. Column of lemma awn glabrous.


Derivation (Clifford & Bostock 2007): L. terni, three each; -arius, pertaining to. Spikelets occurring to triads.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous or pilose or villous. Culms erect, 70–120 cm long. Lateral branches ample. Ligule a ciliolate membrane. Leaf-blades flat or conduplicate, 2–4 mm wide.

Inflorescence. Synflorescence compound, linear.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear. Racemes 2, paired, 3–6 cm long. Rhachis fragile at the nodes, plumose on surface, plumose on margins. Rhachis internodes filiform, 6–9 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 4–5 mm long, 0.9 length of fertile spikelet, plumose.

Sterile Spikelets. Companion sterile spikelets represented by single glumes, linear, 1–2 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–25 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

Country /Province /State. North-central USA, South-central USA, Southeastern USA, Mexico. Iowa, Kansas, Missouri, Oklahoma, Texas, Alabama, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, Northeast Mexico.

Coahuila.


**TYPE** from Uruguay. **Basionym or Replaced Name: Saccharum ternatum** Spreng., *Syst.* 1: 283 (1825). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Uruguay, Montevideo: Coll?.


Illustrations (Journals): *Revista Brasil. Bot.* (29: 298, Fig.32 (2006)).

**Derivation** (Clifford & Bostock 2007): L.* terni,* three each; -ata, possessing. Spikelets in clusters of three.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations intravaginal. Culms erect, 20–70 cm long, 3–4 -noded. Culm-nodes glabrous. Lateral branches sparse. Leaves mostly basal. Leaf-sheaths 2–9 cm long, glabrous on surface or puberulous. Ligule a ciliolate membrane, 0.4–0.6 mm long, truncate. Leaf-blades 4.5–30 cm long, 2–3.5 mm wide. Leaf-blade surface glabrous or pubescent, hairy adaxially. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–4, paired or digitate, 2.5–7 cm long. Rachis fragile at the nodes, villous on margins. Rachis hairs 7–8 mm long. Rachis internodes linear, 0.66 length of fertile spikelet. Rachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 0.75 length of fertile spikelet, villous, with 7–8 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by single glumes, lanceolate, 2.4–5.5 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous, glabrous, acute, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-floowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6.6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled dorsally. Lower glume surface concave. Upper glume linear, coriaceous, 1-keeled. Upper glume muticous or awned, 1 -awned, awn 0.8–3 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3.8 mm long, hyaline, 2 -veined, ciliate on margins. Fertile lemma lanceolate, 3–4.6 mm long, hyaline, without keel, 1 -veined, 0–3 -veined. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 13–22 mm long overall, with twisted column. Column of lemma awn 3.5–7 mm long, glabrous.

**Flower and Fruit.** Anthers 3, 1.5–2.3 mm long. Caryopsis 2–3 mm long, dark brown.

2n = 30 (2 refs TROPICOS).

**Distribution (TDWG).** Continent. South America.
Country /Province /State. Northern South America, Western South America, Brazil, Southern South America. Venezuela, Bolivia, Brazil West Central, Brazil Southeast, Brazil South, Argentina Northeast, Paraguay, Uruguay.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations (Journals): Hooker's Icones Plantarum (t.3088 (1922)).

Derivation (Clifford & Bostock 2007): L. textilis, intertwined. Used for weaving or thatching.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–150 cm long. Ligule an eciliate membrane, 5–20 mm long. Leaf-blades 15–40 cm long, 1–5 mm wide.

Inflorescence. Synflorescence compound, open.


Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 6–7 mm long, longer than fertile. Companion sterile spikelet glumes chartaceous, ciliolate on margins, acute, awned, one glume awned, with 1–3 mm long awn. Companion sterile spikelet lemma 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, laterally compressed, 5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

TYPE from Laos. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Laos: Kemarath (Thorel) Asia Oriental, ?Thorel s.n..

Illustrations: None found.


Inflorescence. Synflorescence compound, scanty.
Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear or lanceolate, 7–10 cm long. Racemes 2, paired, 3–3.5 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs 4–5 mm long. Rhachis internodes filiform, 4 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets ascending, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 4.5 mm long, villous, with 4–5 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, linear, 2–3 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted. Spikelet callus hairs 2.5 mm long.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or lanceolate, 1 length of spikelet, membranous, 2-keeled, keeled laterally, 5 -veined. Lower glume surface flat. Lower glume apex acute. Upper glume linear, 5 mm long, membranous, 1-keeled. Upper glume apex acute, muticus.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 4.5 mm long, hyaline, 2 -veined. Fertile lemma oblong, 1.5–1.8 mm long, hyaline, without keel. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12 mm long overall, with twisted column. Column of lemma awn glabrous.

**Distribution (TDWG).** Continent. Tropical Asia.
Country /Province /State. Indo-China. Laos.


**TYPE** from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: *S.M. Tracy 3083*, 14 Oct 1895, USA: Mississippi: Lowndes County: Columbus (NY-345592; IT: US-75626 (fragm.)).


**Derivation** (Clifford & Bostock 2007): In honour of Samuel Mills Tracy (1847–1920) United States agronomist.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Inflorescence.** Synflorescence compound, linear.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf or enclosed. Spatheole lanceolate, 4–5 cm long. Peduncle 1–3 cm long. Racemes 2, paired, 3–4 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 6 mm long. Rhachis internodes linear, 2–2.5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 5–6 mm long, plumose, with 6 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels or represented by single glumes, linear, 0–1 mm long, shorter than fertile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.5–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, inserted.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15–20 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 1.

\( n = 10 \) (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southeastern USA. Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, South Carolina.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (267, Fig. 97).


**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–100 cm long. Ligule an eciliate membrane. Leaf-blades filiform, 15–30 cm long, 1 mm wide. Leaf-blade surface ribbed.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–8, paired or digitate, 5–8 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis internodes filiform, 2.5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, plumose.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 4 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, glabrous, acute.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma lanceolate, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10 mm long overall, with twisted column. Column of lemma awn glabrous.

**Flower and Fruit.** Anthers 3, 2 mm long.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Western Indian Ocean. Madagascar.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


Illustrations: None found.


**Habit, Vegetative Morphology.** Perennial. Culms erect or geniculately ascending, 50–70 cm long. Culm-internodes smooth, distally glabrous. Lateral branches ample. Leaf-sheaths striately veined, glabrous on surface or puberulous. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1.8–2.5 mm long.
Leaf-blades 12–20 cm long, 2–4 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

**Inflorescence.** Synflorescence simple.


**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 7–7.5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, acute, awned, one glume awned, with 2 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted. Spikelet callus hairs 1.5 mm long.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma oblong, 3.5 mm long, hyaline, without keel. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12–15 mm long overall, with twisted column. Column of lemma awn glabrous.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Western Indian Ocean. Madagascar.


**TYPE** from Dominican Rep. T:<Type of Basionym> fide TROPICOS and Kew Synonomy Database: HT: M.D. Fuertes 1420, Sep 1911, Dominican Republic: Hispaniola I., Barahona Prov.: near Las Salinas, 100 m (US-75628; IT: LE, NY-71020).

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 75–150 cm long. Ligule an eciliate membrane. Leaf-blades involute, 30 cm long, 1–2 mm wide.

**Inflorescence.** Synflorescence compound, paniculate.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole linear, 4–6 cm long. Racemes 2, paired, 2–4 cm long. Rhachis fragile at the nodes, plumose on margins. Rhachis hairs 5 mm long. Rhachis internodes filiform, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3 mm long, plumose, with 5 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas, linear, 2–4 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, glabrous, acuminate, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


Distribution (TDWG). Continent. South America.


Illustrations (Books): J.A.Steyermark et al, Flora of the Venezuelan Guayana Vol. 8 (2004) (24, Fig. 8).


Inflorescence. Synflorescence compound, linear.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole linear. Racemes 1, single, 1–3 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis hairs 1–3 mm long. Rhachis internodes clavate, 2–3.5 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 3.5–3.8 mm long, villous, hairy on margins.

Sterile Spikelets. Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas or containing empty lemmas, lanceolate, 2.4–3.4 mm long, separately deciduous. Companion sterile spikelet glumes chartaceous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.7–5.3 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2-keeled. Fertile lemma lanceolate, 3–4 mm long, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, with lobes 1 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–25 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 1.5–2 mm long, hyaline, 2-keeled. Palea keels ciliolate.

Flower and Fruit. Lodicules 2, 0.5–0.7 mm long. Anthers 3, 1.5–2 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America. Venezuela. Colombia.


**TYPE** from West Indies. **Basionym or Replaced Name:** *Hypogynium virgatum* (Desv. ex Ham.) Dandy, *Journ. Bot.* 64: 54 (1931). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Baudin s.n., West Indies (P).


**Derivation** (Clifford & Bostock 2007): L. *virga*, broom; -ata, possessing. Inflorescence arms or culms held erect.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Basal innovations flabellate. Culms erect, 60–100 cm long. Ligule a ciliolate membrane. Leaf-blades flat or conduplicate, 10–50 cm long, 2–4 mm wide, stiff.

**Inflorescence.** Synflorescence compound, fastigiate, 10–40 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole linear, 0.7–1.5 cm long, herbaceous. Peduncle pubescent above. Racemes 1, single, 6–12 cm long. Rhachis fragile at the nodes, subterete, glabrous on margins. Rhachis internodes linear, 0.5–0.6 mm long. Rhachis internode tip transverse, flat, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 0.5–0.6 mm long, glabrous, tip rectangular.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 2.4–3 mm long, as long as fertile, persistent. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 2.4–3 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 0.5 mm long, glabrous, base truncate, attached transversely.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1.5 mm long, 0.5 length of spikelet, hyaline, 2 -veined. Fertile lemma linear, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, mucous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 0.5–1.3 mm long.

**Distribution (TDWG).** Continent. North America, South America.


Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From Virginia, USA.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–100 cm long. Culm-nodes glabrous. Leaf-sheaths keeled, glabrous on surface or hispid, outer margin glabrous or hairy. Ligule a ciliolate membrane. Leaf-blades flat or conduplicate, 10–20 cm long, 2–5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Synflorescence compound, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole lanceolate, 2.5–6 cm long. Racemes 2–5, paired or digitate, sinuous, 2–3 cm long. Rhachis fragile at the nodes, plumose on surface, plumose on margins. Rhachis hairs 5–10 mm long. Rhachis internodes filiform. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, curved, plumose, with 5–10 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 2.5–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma lanceolate, hyaline, without keel. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 10–26 mm long overall. Palea absent or minute.

Flower and Fruit. Anthers 3.

n = 10 (2 refs TROPICOS).


Mexico, Northeast Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Western South America. Belize, Costa Rica, Guatemala, Honduras, Panama. Bahamas, Bermuda, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico, Colombia.


**Accepted by:** W.D. Clayton & K. Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Inflorescence.** Synflorescence simple.

Inflorescence composed of racemes. Racemes 2–3, paired or digitate, 2–3 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear, 3 mm long. Rhachis internode tip transverse, cupuliform, with simple rim. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 4.5–5.5 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, acuminate, awned, one glume awned, with 0.7–1 mm long awn. Companion sterile spikelet lemmas enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachill extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.5–5.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline, ciliolate on margins. Fertile lemma oblong, 4–4.5 mm long, hyaline, without keel. Lemma margins ciliate, hairy above. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8 mm long overall, with twisted column. Column of lemma awn glabrous.

**Distribution (TDWG).** Continent. Africa.

Country /Province /State. Western Indian Ocean. Madagascar.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -*ense*, denoting origin. From Yunnan Province, China.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–60 cm long, 4–5 -noded. Lateral branches sparse. Ligule an eciliate membrane, 1–1.5 mm long, truncate. Leaf-blades 10–14 cm long, 2.5–3.5 mm wide. Leaf-blade surface scaberulous, rough abaxially, glabrous. Leaf-blade margins scabrous.

**Inflorescence.** Synflorescence compound, scatty.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole linear, 2.5 cm long. Racemes 2, paired, 2–2.5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes clavate, 0.66 length of fertile spikelet. Rhachis internode tip transverse, crateriform, with simple
rim. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, 0.66 length of fertile spikelet, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 6–7 mm long, as long as fertile. Companion sterile spikelet glumes chartaceous, 7 -veined, glabrous, acute.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear or oblanceolate, dorsally compressed, 6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong, 1 mm long, pubescent, base obtuse, inserted.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 4–5 mm long, hyaline, 3 -veined, ciliolate on margins, acute. Fertile lemma lanceolate, 4–5 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 0.33 length of lemma, 0 -veined.

**Flower and Fruit.** Anthers 3, 2.5 mm long.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations (Journals):** *Hooker's Icones Plantarum* (t.3077 (1922) as A. variegatum).

**Derivation** (Clifford & Bostock 2007): in honor of Adolph Ferdinand Stolz (1871–1917) German missionary in East Africa.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Ischaeminae.


**Sterile Spikelets.** Companion sterile spikelets well-developed, male, oblong, asymmetrical, laterally compressed, 6–10 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes cartilaginous, winged on keels (both glumes), distinctly veined, 7 -veined, truncate. Companion sterile spikelet lemmas 2, enclosed by glumes, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, inserted.


**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 4 mm long, hyaline, 3 -veined, acute. Fertile lemma oblong, 4 mm long, hyaline, without keel, 3 -veined, 0–3 -veined.
Lemma apex lobed, 2-fid, incised 0.33 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 8–15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea hyaline, 2 -veined.

**Distribution (TDWG). Continent.** Africa.


**TYPE** from New Zealand. **Basionym or Replaced Name:** Agrostis lessoniana Steud., Nom. ed. 2(1) 41 (1840). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Lesson s.n., New Zealand (P).


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Rhizomes short, scaly. Culms 100–150 cm long. Culm-internodes smooth, distally glabrous. Lateral branches lacking. Leaf-sheaths outer margin hairy. Ligule an eciliate membrane, 1–1.5 mm long, truncate. Leaf-blades involute, 20–40 cm long, 4–8 mm wide, stiff. Leaf-blade surface smooth or scaberulous, rough adaxially, glabrous. Leaf-blade margins smooth or scaberulous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.75–3.25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.15–0.2 mm long, pubescent, obtuse. Floret callus hairs 0.15–0.2 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2.5–3 mm long, 0.9 length of upper glume, scarios, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.75–3.25 mm long, 1.3 length of adjacent fertile lemma, scarios, 1-keeled, 1(–3) -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex erosive, acute, mucronate.

**Florets.** Fertile lemma lanceolate, laterally compressed, 2.1–2.4 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute (above only), exposing palea. Lemma apex dentate, 2-fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 4–9 mm long overall, deciduous. Palea 1.5–1.6 mm long, 0.75 length of lemma, without keels. Palea apex erosive.

**Flower and Fruit.** Lodicules 2, 0.6 mm long. Anthers 1, 1 mm long, yellow, anther tip smooth. Stigmas 2, laterally exserted, plumose. Styles 0 mm long. Caryopsis with adherent pericarp, fusiform, 1.5 mm long. Embryo 0.33 length of caryopsis. Hilum elliptic, 0.15 length of caryopsis.

**Distribution (TDWG). Continent.** Europe (*), Australasia.

**Region. Northern Europe (*).**

**Country /Province /State.** : Great Britain (*). New Zealand. New Zealand North I, New Zealand South I.


**Illustrations (Books):** C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (304 as *Aulacolepis agrostoides* var. *formosana*), C-C Hsu, *Taiwan Grasses* (1975) (435, Pl. 1389 as *Aulacolepis agrostoides* var. *formosana*).

**Derivation** (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling *Agrostis* in some respect, usually the form of the inflorescence.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, equilateral or nodding, 9–13 cm long. Primary panicle branches ascending or spreading, distant, 4–5 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or ovate, laterally compressed, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus sparsely hairy, acute.

**Glumes.** Glumes one the lower absent or obscure or two, persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume orbicular, 0.1 mm long, 0.05 length of upper glume, hyaline. Lower glume apex truncate. Upper glume lanceolate, 1.5–2 mm long, 0.4–0.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma ovate, 3.5 mm long, 1.5–2 mm wide, membranous, keeled, lightly keeled, 5 -veined, more than 3-veined. Lemma midvein scaberulous. Lemma lateral veins obscure. Lemma apex dentate, 2 -fid, acuminate, muticous. Palea 1 length of lemma, hyaline, 2 -veined. Palea keels scaberulous. Palea apex acuminate. Rachilla extension 0.8 mm long, glabrous.

**Flower and Fruit.** Lodicules 2. Anthers 3, 1.2 mm long. Stigmas 2. Caryopsis with adherent pericarp, 2 mm long. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Recent Synonyms:** *Calamagrostis treatleri* (Kuntze) U. Shukla, *Grasses N.E. India* 51 (1996). *Aulacolepis treatleri*.


**Illustrations (Journals):** Hooker’s *Icones Plantarum* t.2396 (1899) as *Deyeuxia*. 


Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.5–2.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous, obtuse.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 1.5–1.7 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acute.

Florets. Fertile lemma ovate, 2.5–2.8 mm long, cartilaginous, keeled, 5 -veined, more than 3-veined. Lemma surface scabrous, rough above. Lemma apex acute. Palea 1 length of lemma, 2 -veined. Palea keels approximate. Palea surface asperulous. Rhachilla extension 0.4 length of fertile floret.

Flower and Fruit. Anthers 3, 1.3 mm long.

2n = 42 (1 ref TROPICOS).


Derivation (Clifford & Bostock 2007): L. -acea, resembling. With inflorescences and/or spikelets similar to those of Avena.

Classification. Subfamily Fagnoideae. Tribe: Phaneospermateae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–100 cm long. Leaves mostly basal. Ligule a ciliolate membrane, 1.5 mm long. Leaf-blades involute, 10–30 cm long, 1–2 mm wide, coriaceous, stiff. Leaf-blade surface ribbed, scabrous, rough adaxially. Leaf-blade apex pungent.


Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 40–50 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 4–6 mm long, pubescent, pungent.

Florets. Fertile lemma linear, subterete, 12–18 mm long, coriaceous, much thinner above, without keel, 7-veined, more than 3-veined. Lemma surface pubescent. Lemma margins involute, covering most of palea. Lemma apex lobed, 2-fid, with linear lobes, incised 0.25 of lemma length, awned, 3-awned. Principal lemma awn from a sinus, geniculate, 60–75 mm long overall, with twisted column. Lateral lemma awns present, arising on inner edge of lobes, wrapped around principal, 25–30 mm long, shorter than principal. Palea 1 length of lemma, scarious, thinner above, 2-veined. Palea keels approximate. Palea apex dentate, 2-fid. Rachilla extension 0.5–1 length of fertile floret.

Flower and Fruit. Lodicules 3, lanceolate, 2.5–3 mm long, membranous, glabrous, acute. Ovary pubescent all over. Caryopsis with tardily free pericarp.


TYPE from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: coll. unknown [presumably received by Mons. Morel from Mons. Porto (of Bahia), and cultivated subsequently], 1842, Brazil: Bahia (P; IT: K, US (fragm. ex P)).

Illustrations (Books): S.A.Renvoize, The Grasses of Bahia, 1984 (42, Fig. 14), E.J.Judziewicz et al, American Bamboos (1999) (323, Fig. 196), R.Pilger, Die Naturlichen Pflanzenfamilien 14e (1940) (219, Fig. 7).


Classification. Subfamily Anomochlooideae. Tribe Anomochloeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 50–100 cm long. Leaves mostly basal. Ligule a fringe of hairs, 1–2 mm long. Leaf-blade base cordate, with a false petiole. Leaf-blades lanceolate to oblong, (18–)25–40 cm long, (40–)60–100 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade apex acute.

Inflorescence. Synflorescence compound, linear (spiciform), 7–14 cm long.

Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, subtended by a spatheole, enclosed. Spatheole lanceolate (enclosing a florescence of 1–5 spikelets, its branches each subtended by 2 bracts), 4.5–9 cm long, herbaceous (with cross-veins). Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 7–15 mm long, tip pyriform.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, curved, laterally compressed, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3–4 mm long, truncate.

Glumes. Glumes one the lower absent or obscure, deciduous, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 10–15 mm long, 0.5 length of adjacent fertile lemma, herbaceous, without keels, 10–17-veined. Upper glume lateral veins with cross-veins. Upper glume apex obtuse.

Florets. Fertile lemma ovate, 9–13 mm long, coriaceous, much thinner above, pallid, without keel, 9–15-veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute. Lemma apex caudate, with a conical beak (herbaceous, deciduous), with this appendage 13–18 mm long. Palea absent or minute.

Flower and Fruit. Lodicules represented by a ring of hairs. Anthers 4, 3–5 mm long. Stigmas 1, terminally exserted, papilllose. Caryopsis with adherent pericarp, oblong, laterally compressed, 10 mm long, apex rostrate. Embryo 0.25 length of caryopsis. Hilum linear, 1 length of caryopsis.

n = 18 (2 refs TROPICOS).

Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil Northeast.

Accepted by: R.J.Soreng et al., Catalogue of New World Grasses (2000–2003) and online, W.D.Clayton & K.Harman, GrassBase (2008) and online (as Leptocoryphium).

TYPE from Mexico. Basionym or Replaced Name: Leptocoryphium lanatum (HBK) Nees, Agrost. Bras. 84 (1829). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Humboldt & Bonpland s.n., Mexico: prope Venture del Camaron et Alto del Perezino (P; IT: K (photo)).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, Flora Argentina 3 – 1, Aristidoideae a Pharoideae (2012) (260), A.S.Hitchcock, Manual of the Grasses of the West Indies (1936) (164, Fig. 104 Leptocoryphium lanatum), S.A.Renvoize, Gramineas de Bolivia (1998) (542, Fig. 123 as Leptocoryphium lanatum), S.A.Renvoize, The Grasses of Bahia, 1984 (250, Fig. 93 as Leptocoryphium), J.A.Steyermark et al, Flora of the Venezuelan Guayana Vol. 8 (2004) (148, Fig. 104), E.G.Nicora, Los Generos de Gramineas de America Austral (1987) (477, Fig. 171 as Leptocoryphium), L.B. Smith, D.C. Wasshausen, R.M. Klein Flora Illustrada Catarinensis Gramineas (1981–1982) (593, Fig. 129 & 614, Fig. 133 as Leptocoryphium lanatum), A.Burkat, Flora Ilustrada de Entre Rios (Argentina), Pt II, Gramineas (1969) (271, Fig.104), A.L.Cabrera, Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas (1970) (472, Fig. 122), M.N.Correia, Flora Patagonica Parte III, Gramineas (1978) (522, Fig. 349 as Leptocoryphium lanatum), F.O.Zuloaga et al, Flora del Paraguay 23 (1994) (195, Fig. 54), B.Rosenburgt, Gramineas UruguayasI (1970) (320. Fig. 136 all as Leptocoryphium), E.Judziewicz, Flora of the Guianas, 187. Poaceae (1990) (318, Fig. 56 as Leptocoryphium).

Illustrations (Journals): Ruizia (13:405 Fig 54a-c (1993) as Leptocoryphium).


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.5–4 mm long, falling entire.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, linear, 1 length of spikelet, membranous, 5–7 -veined, ribbed, villous, hairy on veins, acute. Fertile lemma ovate, dorsally compressed, 3.5–4 mm long, cartilaginous, much thinner above, much thinner on margins, dark brown, without keel. Lemma margins flat. Lemma apex acute. Palea gaping, 1 length of lemma, cartilaginous.

Flower and Fruit. Anthers 3, 2.5 mm long.


Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Paraguay, Uruguay.

Anthenaenantia rufa (Ell.) Schult. Mant. 2: 258. (1824).

Accepted by: R.J.Soreng et al., Catalogue of New World Grasses (2000–2003) and online, W.D.Clayton & K.Harman, GrassBase (2008) and online (as Anthenaenantia).

**TYPE** from USA. Basionym or Replaced Name: Aulaxanthus rufus Elliot.


**Derivation** (Clifford & Bostock 2007): L. reddish. Inflorescence purple to red.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Otachyriinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short, knotty. Culms 70–110 cm long. Ligule a ciliolate membrane. Leaf-blades erect or ascending, parallel-sided, 5–30 cm long, 3–5 mm wide. Leaf-blade margins scaberulous, glabrous. Leaf-blade apex obtuse or abruptly acute.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 8–16 cm long, 2–3(–5) cm wide. Primary panicle branches ascending or spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 3–4 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 3–4 mm long, 1 length of spikelet, membranous, purple, without keels, 5 -veined. Upper glume surface villous. Upper glume hairs dark brown. Upper glume apex obtuse.

**Florrets.** Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret obovate, 3–4 mm long, 1 length of spikelet, membranous, 5 -veined, villous, bearing dark brown hairs, bearing hairs 0.6–1 mm long, obtuse. Fertile lemma ovate, 3–4 mm long, cartilaginous, of similar consistency above, much thinner on margins, dark brown, without keel, 3 -veined, 0–3 -veined. Lemma margins flat. Lemma apex acute. Palea gaping, 1 length of lemma, cartilaginous, 2 -veined.

**Flower and Fruit.** Anthers 3, 2.6–2.8 mm long. Caryopsis with adherent pericarp, orbicular, isodiametric, exposed between gaping lemma and palea at maturity, 1.2–1.4 mm long. Embryo 0.5 length of caryopsis.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** North-central USA, South-central USA, Southeastern USA. Oklahoma. Texas. Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina.

Anthenaenantia villosa (Michx.) Beauv. Agrost. 48. t. 10. f. 7. (1812).

Accepted by: R.J.Soreng et al., Catalogue of New World Grasses (2000–2003) and online, W.D.Clayton & K.Harman, GrassBase (2008) and online (as Anthenaenantia).

**TYPE** from USA. Basionym or Replaced Name: Phalaris villosa Michx., Fl. Bor. Am. 1: 43 (1803).

T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Michaux s.n., USA: In sabulosus Caroliniae (P).


**Derivation** (Clifford & Bostock 2007): L. villi, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Otachyriinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short, scaly. Culms 70–110 cm long. Ligule a ciliolate membrane. Leaf-blades ascending or spreading, tapering towards tip, 5–30 cm long, 5–10 mm wide. Leaf-blade margins scaberulous, tuberculate-ciliate, hairy at base. Leaf-blade apex abruptly acute or acute.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 8–16 cm long, 1–2 cm wide. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 3–4 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 3–4 mm long, 1 length of spikelet, membranous, mid-green, without keels, 5 -veined. Upper glume surface villous. Upper glume hairs white. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret obovate, 3–4 mm long, 1 length of spikelet, membranous, 5 -veined, villous, bearing white hairs, bearing hairs 0.3–0.5 mm mm long, obtuse. Fertile lemma ovate, 3–4 mm long, cartilaginous, of similar consistency above, much thinner on margins, dark brown, without keel, 3 -veined, 0–3 -veined. Lemma margins flat. Lemma apex acute. Palea gaping, 1 length of lemma, cartilaginous, 2 -veined.

**Flower and Fruit.** Anthers 3, 2.6–2.8 mm long. Caryopsis with adherent pericarp, orbicular, isodiametric, exposed between gaping lemma and palea at maturity, 1.2–1.4 mm long. Embryo 0.5 length of caryopsis.

2n = 20 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America.

Country /Province /State. North-central USA, South-central USA, Southeastern USA. Oklahoma. Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, South Carolina.

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**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Otachyriinae.

**Habit, Vegetative Morphology.** Perennial, culms solitary. Rhizomes elongated, scaly. Butt sheaths withering. Culms erect, 60–100 cm long. Leaf-sheaths outer margin hairy. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 10–30 cm long, 6–10 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins scaberulous, tuberculate-ciliate.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 20–30 cm long, 20–30 cm wide. Primary panicle branches 5–10 in number, ascending, 6–13 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, flexuous, 1–8 mm long, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 3–4 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure or two, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 0.5–0.7 mm long, 0.15 length of upper glume, hyaline. Upper glume lanceolate, 3–4 mm long, 1 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume surface pilose, hairy between veins. Upper glume hairs 1 mm long. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 3(–5) -veined, pilose, hairy between veins, bearing hairs 1 mm long, acute. Fertile lemma ovate, dorsally compressed, 3–4 mm long, cartilaginous, much thinner above, much thinner on margins, dark brown, without keel. Lemma lateral veins obscure. Lemma margins flat, ciliolate. Lemma apex acute. Palea gaping, 1 length of lemma, cartilaginous.

**Flower and Fruit.** Anthers 3, 2–2.5 mm long.

**Distribution (TDWG).** Continent. North America.


**Illustrations (Books):** F.O. Zuloaga, Z.E. Rugolo & A.M. Anton, Flora Argentina 3 – 1, Aristidoideae a Pharoideae (2012) (261), E.G. Nicora, Los Generos de Gramineas de America Austral (1987) (446, Fig. 157), F.O. Zuloaga et al, Flora del Paraguay 23 (1994) (18, Fig. 2), R. Pilger, Die Naturlichen Pflanzenfamilien 14 (1940) (42, Fig. 22).

**Illustrations (Journals):** Systematic Botany (18: 444, Fig. 5 (1993)).


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms erect, 65–150 cm long. Culm-internodes elliptical in section, 20–30 cm long, distally glabrous. Culm-nodes brown, glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths 12–27 cm long, glabrous on surface to pubescent, outer margin glabrous or hairy. Ligule an eciliate membrane, 0.3–1.2 mm long. Leaf-blades linear or lanceolate, 9–45 cm long, 5–10 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy adaxially. Leaf-blade margins scabrous. Leaf-blade apex acute.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, compressed slightly, 3–3.6 mm long, 1.2 mm wide, falling entire.

**Glumes.** Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3–1 mm long, 0.1–0.33 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume surface hirsute. Upper glume oblong, 2.6–2.8 mm long, 0.9–0.95 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume lateral veins ribbed. Upper glume surface hirsute, with tubercle-based hairs. Upper glume margins ciliate. Upper glume apex obtuse or acute.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 2.8–3.3 mm long, 1 length of spikelet, membranous, 5–7 -veined, ribbed, hirsute. Palea of lower sterile floret 3–3.3 mm long, 1 length of lemma. Fertile lemma elliptic, 2.9–3.3 mm long, 1 mm wide, coriaceous, yellow, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex acute, papillose or pubescent. Palea gaping, 1 length of lemma, coriaceous.

**Flower and Fruit.** Lodicules 2, 0.3 mm long, truncate. Anthers 3, 2.3–2.4 mm long.

**Distribution (TDWG).** Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia, Argentina Northwest, Paraguay. Jujuy.


**TYPE** from Brazil. Basionym or Replaced Name: Panicum perforatum Nees, Agrost. Bras. 126 (1829). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: IT: F. Sellow s.n., [mis.?] de Schlechtendal, 1829, Brasilia (LE-TRIN-0881.02 (& fig.)).

**Illustrations (Books):** F.O. Zuloaga et al, Flora del Paraguay 23 (1994) (21, Fig. 2).

**Illustrations (Journals):** Systematic Botany (18: 446 (1993), Fig. 6 as var. perforata, 447, Fig. 7 as var. camporum (1993)).

**Derivation** (Clifford & Bostock 2007): L. per, very; forum, open-space; -ata, possessing. With the rhachis bearing an oblong perforation.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 17–95 cm long. Culm-internodes terete, 15–17 cm long, distally glabrous or hirsute. Culm-nodes pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths 6–10.5 cm long, mostly shorter than adjacent culm internode, hirsute to hispid. Ligule an eciliate membrane, 0.3–0.7 mm long, truncate. Collar pilose. Leaf-blades linear or lanceolate, 4–22 cm long, 3–8 mm wide. Leaf-blade surface hirsute. Leaf-blade apex acute.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, compressed slightly, 2.7–3.6 mm long, 1.1–1.5 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3–1.2 mm long, 0.1–0.33 length of spikelet, hyaline, 0–1 -veined. Lower glume lateral veins absent. Lower glume surface hirsute. Upper glume oblong, 2.7–3.3 mm long, 0.9–0.95 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume lateral veins ribbed. Upper glume surface hirsute. Upper glume margins ciliate. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 2.7–3 mm long, 1 length of spikelet, membranous, 5–7 -veined, ribbed, hirsute. Palea of lower sterile floret 2.4–3.1 mm long, 1 length of lemma. Fertile lemma elliptic, 2.4–3 mm long, 1–1.3 mm wide, coriaceous, yellow, without keel, more than 3-veined. Lemma surface papillose. Lemma margins involute. Lemma apex acute, scabrous or pubescent. Palea gaping, 1 length of lemma, coriaceous.

Flower and Fruit. Lodicules 2, 0.4 mm long, truncate. Anthers 3, 2 mm long, purple.


Illustrations (Journals): Systematic Botany (18: 448, Fig.8 (1993)).


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, compressed slightly, obtuse, 3–3.5 mm long, falling entire.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 5 -veined, ribbed, pilose or villous, hairy above, obtuse. Palea of lower sterile floret 1 length of lemma (with pubescent apex). Fertile lemma oblong, 3–3.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute, pubescent. Palea gaping, 1 length of lemma, coriaceous, 2 -veined.

Flower and Fruit. Anthers 3, 2 mm long.
Distribution (TDWG). Continent. South America.
Country /Province /State. Southern South America. Paraguay.

Corrientes, Misiones.


Illustrations (Books): F.O.Zuloaga et al, Flora del Paraguay 23 (1994) (26, Fig. 5).
Illustrations (Journals): Systematic Botany (18: 451, Fig.8 (1993)).
Derivation (Clifford & Bostock 2007): Gk trachys, rough; stachys, spike as of an ear of wheat. Glumes rough.
Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, compressed slightly, obtuse, 3 mm long, falling entire.
Glumes. Glumes one the lower absent or obscure or two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0–1.5 mm long, 0–0.5 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume surface villous. Upper glume ovate, membranous, without keels, 5 -veined. Upper glume lateral veins ribbed. Upper glume surface villous. Upper glume apex acute.
Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, ribbed, villous, bearing hairs 0.5–1 mm long, acute. Fertile lemma ovate, 3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute, pubescent. Palea gaping, 1 length of lemma, coriaceous, 2 -veined.
Distribution (TDWG). Continent. South America.
Country /Province /State. Western South America, Brazil, Southern South America. Bolivia.
Brazil West Central, Brazil South. Paraguay.


**Illustrations**: None found.


**Habit, Vegetative Morphology**. Perennial, caespitose. Culms erect or geniculately ascending, 50–100 cm long. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 10–20 cm long, 2–5 mm wide. Leaf-blade margins cartilaginous.

**Inflorescence**. Inflorescence a panicle. Panicle spiciform, linear, 8–17 cm long. Primary panicle branches accrescent to a central axis, with sessile scars on axis. Panicle axis angular, smooth, bearing deciduous spikelet clusters. Spikelets subtended by an involucre. Fertile spikelets sessile, 6–9 in the cluster. Companion sterile spikelets sessile, 6–9 in the cluster. Involucre composed of imperfect spikelets, oblong, 4–5 mm long, base obtuse, base glabrous.

**Sterile Spikelets**. Companion sterile spikelets represented by single glumes, lanceolate, 4–5 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes free, coriaceous, thicker on margins (cartilaginous as seen from inside), 7–11 -veined, scabrous, glabrous, acute or acuminate, muticous or awned, with 0–4 mm long awn.

**Fertile Spikelets**. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3–4 mm long, falling entire, deciduous with accessory branch structures.

**Glumes**. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume subulate, 1 length of spikelet.

**Florets**. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 5–7 -veined, puberulous, eciliate on margins, obtuse. Fertile lemma lanceolate, 3–5 mm long, cartilaginous, much thinner on margins, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma surface asperulous (above). Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous, 1-keeled.

**Flower and Fruit**. Anthers 3, 2 mm long.

**Distribution (TDWG). Continent**. Africa.


**TYPE** from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Cape Province...Hay dist. near Dunmurry, on sides of kloff, *Wilmann 2203*.


**Derivation** (Clifford & Bostock 2007): *L. silvery*. Glumes or lemmas silvery.


**Habit, Vegetative Morphology**. Perennial, caespitose. Culms erect, 40–90 cm long. Leaf-sheaths wider than blade at the collar. Ligule an eciliate membrane, 4–8 mm long. Leaf-blades tapering towards sheath, conduplicate, 10–15 cm long, 1–2 mm wide, stiff. Leaf-blade surface ribbed. Leaf-blade margins unthickened.

Sterile Spikelets. Companion sterile spikelets represented by single glumes, elliptic, 5–7 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes free, coriaceous, 3–4-veined, villous, acute, muticus.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume subulate, 0.75–0.8 length of spikelet. Upper glume margins ciliolate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, villous, hairy above, acute. Fertile lemma lanceolate, 4–6 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous, 1-keeled.

Flower and Fruit. Anthers 3, 2n = 9 (1 ref TROPICOS).


Country/Province/State. Southern Africa. Namibia, Botswana, North-West, Northern Cape.


**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Anthephorinae.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, 50–100 cm long, without nodal roots or rooting from lower nodes. Leaf-sheaths glabrous on surface or hirsute. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades tapering towards tip, 5–10 cm long, 3–8 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins cartilaginous, crenate.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 2.5–8 cm long. Primary panicle branches accrescent to a central axis, with sessile scars on axis. Panicle axis angular, scaberulous, bearing deciduous spikelet clusters. Spikelets subtended by an involucre. Fertile spikelets sessile, 3–8 in the cluster. Companion sterile spikelets sessile, 3–8 in the cluster. Involucre composed of imperfect spikelets, connate into a disc below (3–4mm diam), cuneate (conical), 3.5–6 mm long, base obtuse, base glabrous.

Sterile Spikelets. Companion sterile spikelets represented by single glumes, ovate, 3.5–6 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes united below, coriaceous, thinner on margins, 7–15 -veined, scaberulous, glabrous, obtuse or acute, muticus.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3–4 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume subulate, 0.5–0.75 length of spikelet. Upper glume margins ciliolate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 7–9 -veined, scaberulous, puberulous, ciliolate on margins, acute or acuminate. Fertile lemma lanceolate, 3–4 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous, 1-keeled.

Flower and Fruit. Anthers 3, 2 mm long.


Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online.

**TYPE** from DRC. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Lukafu, fevrier, Ct. Verdick, 413.


**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Anthephorinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 50–100 cm long. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 10–40 cm long, 2–7(–12) mm wide. Leaf-blade margins cartilaginous.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, 8–20 cm long. Primary panicle branches accrescent to a central axis, with sessile scars on axis. Panicle axis angular, scaberulous, bearing deciduous spikelet clusters. Spikelets subtended by an involucre. Fertile spikelets sessile, 6–9 in the cluster. Companion sterile spikelets sessile, 6–9 in the cluster. Involucre composed of imperfect spikelets, oblong, 5–6 mm long, base obtuse, base glabrous.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, lanceolate, 5–6 mm long, shorter than fertile, deciduous with the fertile. Companion sterile spikelet glumes free, coriaceous, thicker on margins (cartilaginous as seen from inside), 7–11 -veined, scabrous, glabrous, setaceous acuminata, muticous or awned, with 0–4 mm long awn.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 6–7 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume subulate, 1 length of spikelet.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 5–7 -veined, puberulous, eciliate on margins or ciliate on margins (above), acute. Fertile lemma lanceolate, 6–7 mm long, cartilaginous, much thinner on margins, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma surface asperulous, rough above. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous, 1-keeled.

**Flower and Fruit.** Anthers 3, 3–3.5 mm long.

**Distribution (TDWG).** Continent. Africa.


**Illustrations (Journals):** *Ruizia* (13:416 Fig 5Se-f (1993)).
**Derivation** (Clifford & Bostock 2007): L. bisexual. Spikelets each with a single bisexual floret.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Anthephorinae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending or decumbent, 20–80 cm long, without nodal roots or rooting from lower nodes. Ligule an eciliate membrane, 1.5–2.5 mm long. Leaf-blades 2.5–17 cm long, 4–7 mm wide. Leaf-blade surface glabrous or hispid. Leaf-blade apex acute or acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, 3.5–10 cm long. Primary panicle branches accrescent to a central axis, with sessile scars on axis. Panicle axis angular, bearing deciduous spikelet clusters. Spikelets subtended by an involucre. Fertile spikelets sessile, 2 in the cluster. Companion sterile spikelets sessile, 4 in the cluster. Involute composed of imperfect spikelets, connate into a cup below, oblong, 6–9 mm long, base obtuse.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, ovate, 6–9 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes united below, coriaceous, glabrous, acuminate, muticus.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3.5–4.5 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume subulate, 1.7–4.2 mm long, 0.5–0.9 length of spikelet.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 7 -veined, scabrous, glabrous, acute. Fertile lemma ovate, 3.7–4 mm long, cartilaginous, much thinner on margins, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous, 1-keeled.

**Flower and Fruit.** Anthers 3.

2n = 18 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Hawaii (*). Southeastern USA, Mexico. Florida (*). Central Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Aruba, Bahamas, Bermuda, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago, Venezuela and Netherlands Antilles. French Guiana, Venezuela. Colombia, Ecuador, Galapagos, Peru. Brazil Northeast, Brazil Southeast, Brazil North.


**Derivation** (Clifford & Bostock 2007): L. smooth. Lacking hairs or roughness, usually of leaf-blades or lemmas.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Anthephorinae.

**Habit, Vegetative Morphology.** Perennial. Culms erect or geniculately ascending, 20–40 cm long, 2–5 -noded. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 4–8 cm long, 2–4 mm wide, glauccous. Leaf-blade surface glabrous. Leaf-blade apex attenuate, filiform.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, 4–8 cm long. Primary panicle branches accrescent to a central axis, with sessile scars on axis. Panicle axis angular, glabrous, bearing deciduous spikelet clusters. Spikelets subtended by an involucre. Fertile spikelets sessile, 4–5 in the cluster.
Companion sterile spikelets sessile, 4–5 in the cluster. Involucre composed of imperfect spikelets, oblong, 3.5–4.5 mm long, base obtuse, base pubescent.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, elliptic or oblong, 3.5–4.5 mm long, as long as fertile, deciduous with the fertile. Companion sterile spikelet glumes free, coriaceous, 4–6 -veined, smooth, glabrous, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.5–4.5 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume subulate, 2–3 mm long, hyaline, 1 -veined. Upper glume margins ciliolate.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret linear or oblong, 3.5–4 mm long, 1 length of spikelet, membranous, 3 -veined, pubescent, acute. Fertile lemma linear or lanceolate, 3.5–4.5 mm long, chartaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex acute. Palea 1 length of lemma, chartaceous, 1-keeled.

**Flower and Fruit.** Anthers 3, 1.5–3 mm long.

**Distribution (TDWG).** Continent. Africa, Temperate Asia.

**Country /Province /State.** Northeast Tropical Africa. Eritrea, Sudan. Western Asia. Palestine, Israel & Jordan.


**TYPE** from Nigeria. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Nigeria, Nupe: Barter 1380 (K syn); Nigeria, Katagum district: Dalziel 260 (K syn).


**Derivation** (Clifford & Bostock 2007): L. -ana, indicating location. From the Niger region of Upper Guinea.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Anthephorinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Butt sheaths villous. Culms erect or geniculately ascending, 50–150 cm long. Leaf-sheath auricles absent or erect. Ligule an eciliate membrane, 1–7 mm long. Leaf-blades 10–40 cm long, 3 –8 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, 10–24 cm long. Primary panicle branches accrescent to a central axis, with sessile scars on axis. Panicle axis angular, scaberulous, bearing deciduous spikelet clusters. Spikelets subtended by an involucre. Fertile spikelets sessile, 6–9 in the cluster. Companion sterile spikelets sessile, 6–9 in the cluster. Involucre composed of imperfect spikelets, oblong, 4–6 mm long, base obtuse, base pubescent.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, elliptic, 4–6 mm long, as long as fertile, deciduous with the fertile. Companion sterile spikelet glumes free, coriaceous, thinner on margins, 3–7 -veined, pubescent, acute, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–6 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume subulate, 1 length of spikelet. Upper glume margins ciliolate.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 5–7 -veined, scaberulous, glabrous, ciliolate on margins, bearing hairs 0.2–0.5 mm long, obtuse. Fertile lemma lanceolate, 4–6 mm long, cartilaginous, much thinner on margins, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex obtuse or acute. Palea cartilaginous, 1-keeled.

**Flower and Fruit.** Anthers 3, 1.5–3 mm long.

**Distribution (TDWG).** Continent. Africa, Temperate Asia.


**Derivation** (Clifford & Bostock 2007): L. pubesco, become hairy. Plant whole or in part hairy.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Anthephorinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect or geniculately ascending, 30–100 cm long. Leaf-sheath auricles absent or erect. Ligule an eciliate membrane, 2–8 mm long. Leaf-blades 3–40 cm long, 2–6 mm wide. Leaf-blade margins cartilaginous, crenate.


**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, lanceolate, 6–11 mm long, as long as fertile, deciduous with the fertile. Companion sterile spikelet glumes free, coriaceous, 3–7 -veined, pilose to villous, acute or acuminate or setaceously acuminate, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3–7 mm long, falling entire, decious with accessory branch structures.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume subulate, 3–6 mm long. Upper glume margins ciliate.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 4–6 mm long, 1 length of spikelet, hyaline, 3–7 -veined, puberulous, ciliate on margins, bearing hairs 1 mm long, acute. Fertile lemma lanceolate, 4–6 mm long, cartilaginous, much thinner on margins, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous (above). Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous, 1-keeled.

**Flower and Fruit.** 2n = 36 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations**: None found.
**Derivation** (Clifford & Bostock 2007): stipes sharp-pointed.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Anthephorinae.

**Habit, Vegetative Morphology.** Annual. Culms decumbent, 30–40 cm long. Ligule an eciliate membrane, 0.5–2 mm long. Leaf-blades tapering towards tip, 2–6 cm long, 2.5–6 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins cartilaginous.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, 2–6 cm long. Primary panicle branches accrescent to a central axis, with sessile scars on axis. Panicle axis angular, bearing deciduous spikelet clusters. Spikelets subtended by an involucre. Fertile spikelets sessile, 4–6 in the cluster. Companion sterile spikelets sessile, 4–6 in the cluster. Involucre composed of imperfect spikelets, connate into a cup below, oblong, 6–6.5 mm long, base pungently stipitate (4 mm long), base pubescent.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, elliptic, 6–6.5 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes united below, coriaceous, thicker on margins, 13 -veined, pubescent, acuminate, awned, with 6–15 mm long awn.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures.

**Glumes.** Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume subulate, 0.5 length of spikelet.

**Flowers.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, puberulous, acute. Fertile lemma lanceolate, 4–5 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous, 1-keeled.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: Africa.

**Country /Province /State.** South Tropical Africa. Malawi, Mozambique, Zambia.


**TYPE** from Namibia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *H. Schinz s.n.*, no date, Namibia (W; IT: US-865422 (fragm. ex W)).


**Derivation** (Clifford & Bostock 2007): in honor of Hans Schinz (1858–1941) Swiss traveller and botanist.

**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Anthephorinae.

**Habit, Vegetative Morphology.** Annual, caespitose, clumped loosely. Culms geniculately ascending, 12–35 cm long, 4–5 -noded. Culm-internodes distally pubescent. Leaf-sheaths pilose. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades 6–10 cm long. Leaf-blades 6–10 cm long, 4–6 mm wide, glaucous. Leaf-blade surface scaberulous, rough abaxially, pubescent, hairy adaxially. Leaf-blade margins cartilaginous, crenate. Leaf-blade apex acute, callose.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear, flexuous, 3–7 cm long. Primary panicle branches accrescent to a central axis, with sessile scars on axis. Panicle axis angular, scaberulous, glabrous, bearing deciduous spikelet clusters. Spikelets subtended by an involucre. Fertile spikelets sessile, 4–5 in the cluster. Companion sterile spikelets sessile, 4–5 in the cluster. Involucre composed of imperfect spikelets, elliptic, 4–5 mm long, base obtuse, base villous.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, lanceolate, 5–6 mm long, as long as fertile, deciduous with the fertile. Companion sterile spikelet glumes free, coriaceous, 7–13 -veined, scaberulous (above), pubescent to villous (below), entire or dentate, 2 -fid, setaceous acuminate, muticous or awned, with 0–5 mm long awn.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures.
**Glumes.** Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume subulate, 3–3.5 mm long, hyaline, 1 -veined. Upper glume margins ciliolate.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate or oblong, 4–4.5 mm long, 1 length of spikelet, membranous, 3–6 -veined, puberulous, ciliate on margins, bearing hairs 2–3 mm long, obtuse or acute. Fertile lemma lanceolate or ovate, 4–4.5 mm long, chartaceous, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma margins flat, covering most of palea. Lemma apex acute. Palea 1 length of lemma, chartaceous, 1-keeled.

**Flower and Fruit.** Anthers 3, 2.5 mm long.

**Distribution (TDWG).** Continent. Africa.


TYPE from DRC. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Zaire, Kasenga: Robyns 1915 (K iso).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. trunco, shorten by cutting off. Truncate with respect to ligules.


**Habit, Vegetative Morphology.** Annual. Culms decumbent, 25–100 cm long, rooting from lower nodes. Leaf-sheaths hirsute, with tubercle-based hairs. Leaf-sheath auricles erect. Ligule an eciliate membrane, 3–4 mm long. Leaf-blades 5–15 cm long, 2–5 mm wide.


Sterile Spikelets. Companion sterile spikelets represented by single glumes, oblong, 3.5–6 mm long, as long as fertile or longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes united below, coriaceous, thinner on margins, winged on margins (above), 7–9 -veined, pubescent, emarginate to acute, awned, with 1–25 mm long awn.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.5–4 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume subulate, 1 length of spikelet.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 3 -veined, puberulous, acute. Fertile lemma lanceolate, 3.5–4 mm long, cartilaginous, much thinner on margins, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous, 1-keeled.

**Flower and Fruit.** Anthers 3, 2 mm long.

**Distribution (TDWG).** Continent. Africa.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. growing in the sunshine. Savanna or grassland species.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or elongated. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Basal innovations intravaginal. Culms erect, 50–100 cm long. Leaf-nodes black. Leaf-sheaths 7–10 cm long, keeled, striately veined, glabrous on surface or pubescent. Leaf-sheath oral hairs lacking or ciliate. Leaf-sheath auricles absent or falcate, 0.3–0.5 mm long. Ligule a ciliolate membrane, 0.3–0.5 mm long. Collar ciliate. Leaf-blades 20–30 cm long, 2–4 mm wide, glaucous. Leaf-blade surface ribbed, glabrous or pilose. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, bilateral, 18–25 cm long, bearing 3–7 fertile spikelets on each. Rhachis flattened, scabrous on margins. Spikelet packing broadside to rhachis. Rhachis internodes linear. Rhachis internode tip flat. Spikelets spreading or deflexed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 6–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic to oblong, laterally compressed, 30–50 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2–3 mm long, pubescent. Floret callus 0.75 mm long, pilose.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 5–10 mm long, 1 length of upper glume, coriaceous, without keels, 3 -veined. Lower glume margins ciliate. Lower glume apex acuminate to setaceously acuminate. Upper glume lanceolate, 5–10 mm long, coriaceous, without keels, 3 -veined. Upper glume margins ciliate. Upper glume apex acuminate to setaceously acuminate.

**Florets.** Fertile lemma lanceolate, 10–14 mm long, coriaceous, keeled, keeled above. Lemma surface scabrous, rough above. Lemma margins scabrous. Lemma apex entire or dentate, 2 -fid, awned, 1 -awned. Principal lemma awn apical or from a sinus, straight or curved, 22–45 mm long overall. Palea 6–13 mm long. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, 1–2.5 mm long, membranous. Anthers 3, 4–9 mm long, yellow or purple. Stigmas 2. Caryopsis with adherent pericarp, 7–10 mm long. Embryo 0.2 length of caryopsis. 2n = 42 (1 ref TROPICOS).

**Fertile Spikelets.** Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 40–50 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1.5–2 mm long, pubescent. Floret callus 0.75 mm long, pubescent.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 4–9 mm long, 1 length of upper glume, coriaceous, 1-keeled, 3 -veined. Lower glume apex acuminate to setaceously acuminate. Upper glume lanceolate, 4–9 mm long, coriaceous, 1-keeled, 3 -veined. Upper glume apex acuminate to setaceously acuminate.

**Florets.** Fertile lemma lanceolate, 8–12 mm long, coriaceous, pruinose, keeled. Lemma midvein scabrous. Lemma surface scabrous, rough above. Lemma apex awned, 1 -awned. Principal lemma awn curved, reflexed, 30–50 mm long overall. Palea 7–10 mm long. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodices 2, 1.2–1.4 mm long, membranous. Anthers 3, 2.4–2.5 mm long, yellow. Stigmas 2. Caryopsis with adherent pericarp, 6–6.5 mm long. Embryo 0.15 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** New Zealand. New Zealand South I.


**Illustrations (Journals):** *Novon* (19, 169, Fig.1 (2009)).

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Queensland, New South Wales.


**TYPE from Australia, Norfolk Island. Basionym or Replaced Name: Triticum kingianum** Endl., *Prodr. Fl. Norfolk.* 21 (1833)


**Illustrations: None found.**

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial. Culms geniculately ascending, weak, 60 cm long. Leaf-sheath auricles falcate. Ligule an eciliate membrane, 0.5–1 mm long, truncate. Leaf-blades 10–12 cm long, 6–9 mm wide, flaccid. Leaf-blade surface scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 5–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 25–30 mm long, breaking up at maturity, disarticulating below each fertile floret.
Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 10 mm long, 1 length of upper glume, coriaceous, without keels, 3 -veined. Lower glume apex attenuate. Upper glume lanceolate, 10 mm long, coriaceous, without keels, 5–7 -veined. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, 10–15 mm long, coriaceous, 5 -veined, more than 3-veined. Lemma apex attenuate, awned, 1 -awned. Principal lemma awn 7–10 mm long overall. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Elymus*), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*) (as *Elymus*).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *longus*, long; *seta*, bristle. Glumes or lemmas long awned.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms erect, 50–80 cm long. Culm-internodes distally glabrous. Culm-nodes black, glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface. Leaf-sheath auricles absent or falcate. Ligule an eciliate membrane, 0.6–1 mm long. Leaf-blades flat or involute, 9–33 cm long, 1–5 mm wide. Leaf-blade surface glabrous to pilose.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, arcuate, bilateral, 7–20 cm long, bearing 4–10 fertile spikelets on each. Spikelet packing broadside to rhachis. Rhachis internodes linear. Spikelets solitary. Fertile spikelets sessile. Pedicels present, oblong, 1 mm long, puberulous.

**Fertile Spikelets.** Spikelets comprising 4–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic to oblong, laterally compressed, 20–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2–3 mm long, pubescent. Floret callus evident, 1 mm long, pilose, with elliptic scar.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 5–15 mm long, 0.75–0.85 length of upper glume, coriaceous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume lanceolate, 6–18 mm long, 0.8–1.1 length of adjacent fertile lemma, coriaceous, without keels, 6–7 -veined. Upper glume apex acute.


**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.5–2 mm long, retained within floret. Stigmas 2. Ovary pubescent on apex. Caryopsis with adherent pericarp, 7.5 mm long.

**Distribution (TDWG).** Continent. Tropical Asia.


Derivation (Clifford & Bostock 2007): *L. multus*, many; *flos*, flower. Spikelets with more florets than those of related species.


Fertile Spikelets. Spikelets comprising 6–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic to oblong, curved, laterally compressed, 10–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pilose, with 1–2 mm long hairs. Floret callus bearded.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 8–10 mm long, 0.9 length of upper glume, coriaceous, without keels, 3–7 -veined. Lower glume apex setaceous acuminate. Upper glume lanceolate, 8–10 mm long, coriaceous, without keels, 3–7 -veined. Upper glume apex setaceous acuminate.

Florets. Fertile lemma lanceolate, 10–13 mm long, coriaceous, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma apex acute, muticous or mucronate or awned, 1 -awned. Principal lemma awn 1–5 mm long overall. Palea 1 length of lemma. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.


Southern. Central, South East, Island. Coast, Tablelands.


Classification. Tribe: Triticeae.

Habit, Vegetative Morphology. Perennial. Culms erect, 30–55 cm long. Leaf-sheath auricles falcate, 0.05–1.6 mm long. Ligule an eciliate membrane, 0.3–0.8 mm long. Leaf-blades 15–30 cm long, 1.8–4.1 mm wide.

**Fertile Spikelets.** Spikelets comprising 2–20 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 25–48 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate or obovate, 7.7–11 mm long, 0.9–1 length of upper glume, coriaceous, without keels, 5–6 -veined. Lower glume apex acute. Upper glume ovate or obovate, 8–12 mm long, 0.66–0.9 length of adjacent fertile lemma, coriaceous, without keels, 5–8 -veined. Upper glume apex acute.

**Florets.** Fertile lemma elliptic or ovate, 12–14.5 mm long, coriaceous, keeled, keeled above, 5–7 -veined, more than 3-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn curved, 17–27 mm long overall. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 3, 2.3–3 mm long.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia, South Australia, New South Wales, Victoria.

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**Derivation** (Clifford & Bostock 2007): *L. rectus*, upright; *seta*, bristle.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial. Basal innovations extravaginal and intravaginal. Culms geniculately ascending or decumbent, 100–150 cm long. Culm-internodes smooth or scaberulous, distally pubescent. Leaf-sheaths 5–10 cm long, hirsute, with simple hairs or reflexed hairs. Leaf-sheath auricles falcate, 0.5–1 mm long. Ligule an eciliate membrane, 0.1 mm long, truncate. Leaf-blades 18 cm long, 1–4 mm wide. Leaf-blade surface smooth or scaberulous, hirsute, hairy on both sides.


**Fertile Spikelets.** Spikelets comprising 5–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic to oblong, laterally compressed, 40–55 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1.5–2.3 mm long, pilose. Floret callus 0.75 mm long, pilose.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 4–10 mm long, 1 length of upper glume, coriaceous, 1-keeled, 3–5 -veined. Lower glume surface pilose, hairy at apex. Lower glume apex scapaceous acuminate. Upper glume lanceolate, 4–10 mm long, coriaceous, 1-keeled, 3–5 -veined. Upper glume surface pilose, hairy at apex. Upper glume apex scapaceous acuminate.

**Florets.** Fertile lemma lanceolate, 9–11 mm long, coriaceous, keeled, keeled above. Lemma apex awned, 1 -awned. Principal lemma awn straight, 30–50 mm long overall. Palea 9–11 mm long. Palea apex emarginate or truncate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, 1–1.25 mm long, membranous. Anthers 3, 1.8–2.3 mm long. Stigmas 2. Caryopsis with adherent pericarp, 6–6.5 mm long. Embryo 0.15 length of caryopsis.

2n = 42 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia, New Zealand. Western Australia, South Australia, New South Wales, Victoria, Lord Howe-Norfolk Is. New Zealand North I, New Zealand South I.

Eremean.


New Zealand: Isolation Creek, NW of Ben More, Marlborough, 800 ft, Dec 1975, A.P. Druce s.n. (HT: CHR-279320).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. sakos, shield; aner, male. The dense weft of hairs on the upper leaf-surface immediately above the ligule resemble the male pubes.


Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal and intravaginal. Culms erect, 15–40 cm long, rooting from lower nodes. Leaf-sheaths 3–12 cm long, ribbed, scaberulous, glabrous on surface. Leaf-sheath oral hairs lacking or pubescent. Leaf-sheath auricles absent or foliate, 0.5–1 mm long. Ligule an eciliate membrane, 0.2–0.3 mm long. Collar pilose. Leaf-blades filiform, involute, 10–80 cm long, 0.5–0.7 mm wide, glaucous. Leaf-surface ribbed, pubescent, hairy adaxially. Leaf-blade margins ciliate, hairy at base.


Fertile Spikelets. Spikelets comprising 6–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic to oblong, laterally compressed, 40–60 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2–3 mm long, pilose. Floret callus 1–1.5 mm long, bearded. Floret callus hairs 1.5–2.5 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 4.5–6.5 mm long, 0.5–0.66 length of upper glume, coriaceous, without keels, 3–5 -veined. Lower glume apex setaceously acuminate. Upper glume lanceolate, 7–11 mm long, coriaceous, without keels, 5–7 -veined. Upper glume apex setaceously acuminate.


Flower and Fruit. Lodicules 2, 1.5–2 mm long, membranous. Anthers 3, 3.8–5.5 mm long. Stigmas 2. Caryopsis with adherent pericarp, 5–6 mm long. Embryo 0.25 length of caryopsis.


Country/Province/State. New Zealand. New Zealand South I.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Derivation (Clifford & Bostock 2007): L. rough or gritty to the touch. Plants with rough leaf-blades, spikelets or stems.


scabrous. Culm-nodes glabrous. Leaves mostly basal. Ligule an eciliate membrane. Leaf-blades flat or involute, 10–40 cm long, 2–4 mm wide, glaucous. Leaf-blade margins scabrous.


Fertile Spikelets. Spikelets comprising 2–20 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 25–35 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume oblong, 8–10 mm long, 0.66–0.8 length of upper glume, coriaceous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume oblong, 12 mm long, 1 length of adjacent fertile lemma, coriaceous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Fertile lemma elliptic, 12 mm long, coriaceous, keeled, keeled above, 5 -veined, more than 3-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn 30–40 mm long overall. Palea 0.9 length of lemma. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, elliptic, membranous. Anthers 3, 2.5 mm long. Stigmas 2. Ovary pubescent on apex. Caryopsis with adherent pericarp.

2n = 42 (4 refs TROPICOS).

Distribution (TDWG). Continent. Australasia. Country /Province /State. Australia, New Zealand (*). Western Australia, South Australia, Queensland, New South Wales, Victoria, Tasmania. New Zealand North I, New Zealand South I.


Illustrations: None found.

Images: R.Darke, The Encyclopaedia of Grasses for Liveable Landscapes (2007):.


Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Stolons present. Basal innovations extravaginal and intravaginal. Culms geniculately ascending or decumbent or prostrate, 40–100 cm long, rooting from lower nodes. Leaf-sheaths 3–5 cm long, keeled, puberulous. Leaf-sheath oral hairs pubescent. Leaf-sheath auricles falcate, 1–1.5 mm long. Ligule an eciliate membrane, 0.2–0.5 mm long, truncate. Collar pubescent. Leaf-blades flat or conduplicate or involute, 15–21 cm long, 2–4 mm wide, glaucous. Leaf-blade surface ribbed, puberulous, hairy adaxially. Leaf-blade margins smooth or scaberulous.


Fertile Spikelets. Spikelets comprising 4–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic to oblong, laterally compressed, 25–80 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1.5–3 mm long, pubescent. Floret callus 0.75 mm long, pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 3–11 mm long, 0.66 length of upper glume, coriaceous, 1-keeled, 3 -veined. Lower glume surface asperulous, rough above. Lower glume apex acuminate to setaceously acuminate. Upper glume lanceolate, 5–12 mm long,


**Flower and Fruit.** Lodicules 2, 1.25–1.5 mm long, membranous. Anthers 3, 3–5 mm long. Stigmas 2. Caryopsis with adherent pericarp, 5–6.5 mm long. Embryo 0.25 length of caryopsis.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Derivation** (Clifford & Bostock 2007): L.-ica, belonging to. In classical usage Aethiopia was south of the Sudan and widely used in that sense.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, linear or lanceolate, 3.5–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–8.4 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6.5–8 mm long, 0.75–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 7–8.4 mm long, 2.5–2.8 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 3.3–4.3 mm long, chartaceous, without keels, 5 -veined, emarginate, awned. Awn of lower sterile floret 2.6–4.4 mm long. Lemma of upper sterile floret oblong, 2.3–4.4 mm long, chartaceous, obtuse, awned. Awn of upper sterile floret dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 6.7–8.5 mm long. Fertile lemma oblong, 2.5(–3.6) mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex emarginate. Palea oblong, 1 -veined, without keels.


**Distribution (TDWG).** Continent: Africa.

**Country/Province/State.** Northeast Tropical Africa. Ethiopia (inc. Eritrea).


Anthoxanthum amarum Brot. Phyt. Lusit. 11. t. 4. f. 1. (1800).


TYPE from Portugal. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Portugal, Beira: Coll?.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. unpleasant. Foliage bitter to the taste.


Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 10–13 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 5–6 mm long, 0.5 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume elliptic, 10–13 mm long, 4 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 5–6 mm long, 1.5–2 length of fertile lemma, scarious, without keels, pubescent, lobed, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, 4–5 mm long. Lemma of upper sterile floret oblong, 5–6 mm long, 1 length of lower sterile floret, scarios, pubescent, lobed, 2 -fid, obstone, awned. Awn of upper sterile floret dorsal, geniculate, 7–8 mm long. Fertile lemma orbicular, 2.5–3 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1 -veined, without keels.


Region. Southwestern Europe.


ST: Mr. Evens, 1820, Melville Island (BM; US (photo)).
LT: no. 67, Mr. Beverley, 1820, Melville Island (BM; US (photo)). LT designated by A. J. W. [or M.?] (1935).
IST: Ross Voy., 24 Jul 1820, Melville Island, Winter Harbour (BM; US (fragm. ex BM)).
Derivation (Clifford & Bostock 2007): Gk arktos, north; -ica, belonging to. Occurring in and often extending beyond the Arctic.
Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 1.5–3 cm long, bearing few spikelets. Primary panicle branches appressed, bearing 1–2 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.
Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret.
Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma, shiny. Lower glume ovate, 2.5 mm long, 0.75 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 3.5–4.5 mm long, 0.9 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.
Florets. Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 1 length of fertile lemma, membranous, 1-keeled, 5 -veined, scabrous, entire, acute, muticus or mucronate. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, membranous, scabrous, entire, acute, muticus or mucronate. Fertile lemma ovate, 4–5 mm long, cartilaginous, without keel, more than 3-veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 3 -veined, without keels.
Flower and Fruit. Anthers 2 (bisexual) or 3 (male). Ovary glabrous. Caryopsis with adherent pericarp.
Region. Northern Europe. Eastern Europe.


Derivation (Clifford & Bostock 2007): L. arista, bristle; -ata, possessing. The apices of lemmas, paleas or glumes drawn out into a distinct awn.
Habit, Vegetative Morphology. Annual, caespitose. Butt sheaths herbaceous, withering. Culms erect or geniculately ascending, 10–40 cm long, 4–5 -node. Lateral branches sparse. Leaves mostly basal. Ligule an eciliate membrane, 1.5–3 mm long. Leaf-blades 0.8–6 cm long, 1–5 mm wide, aromatic. Leaf-blade surface glabrous or pubescent, hairy adaxially. Leaf-blade apex acuminate.
Inflorescence. Inflorescence a panicle. Panicle scipiform, oblong or ovate, continuous or interrupted, 1–4 cm long, 0.3–1.2 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.1–0.3 mm long, pubescent.

Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–7.5(–8) mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 3.6–5.2 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex acuminate, muticous or mucronate. Upper glume elliptic, 5–7.5(–8) mm long, 2.5–4 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume surface glabrous. Upper glume apex acuminate, muticous or mucronate.

Florets. Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 2.8–3.9 mm long, 1.5–2 length of fertile lemma, membranous, 1-keeled, 4–5 -veined, pilose, erose, truncate, awned. Awn of lower sterile floret dorsal, arising 0.6 way up back of lemma, 4–5 mm long. Lemma of upper sterile floret oblong, 3–4 mm long, 1 length of lower sterile floret, membranous, pilose, erose, truncate, awned. Awn of upper sterile floret dorsal, arising 0.1 way up back of lemma, geniculate, 7–10 mm long. Fertile lemma orbicular, (1.4–)1.6–2.1 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 2, 2.8–4.1 mm long. Stigmas 2, protogynous, pubescent. Caryopsis with adherent pericarp, ellipsoid. Embryo 0.33 length of caryopsis. Hilum punctiform.

2n = 3 (3 refs TROPICOS).

Region. Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret.
Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate or ovate, 4.5–5 mm long, 0.66–0.75 length of upper glume, chartaceous, yellow, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate or ovate, 6–8 mm long, 2.5–3 length of adjacent fertile lemma, chartaceous, yellow, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 2 or more, dissimilar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 5–6 mm long, chartaceous, without keels, 5 -veined, pubescent, dentate, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, 3–4 mm long. Palea of lower sterile floret 4–5 mm long. Lemma of upper sterile floret oblong, 5–6 mm long, chartaceous, pubescent, dentate, 2 -fid, obtuse, awned. Awn of upper sterlile floret dorsal, arising 0.33 way up back of lemma, straight, 10–12 mm long. Fertile lemma oblong or orbicular, 2–3 mm long, 1.5–2 mm wide, cartilaginous, without keel, 3–7 -veined, 0–3 -veined or more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea lanceolate, 1.5–2 mm long, 2 -veined.


$n = 28$ (2 refs TROPICOS).


Country /Province /State. Indian Subcontinent. India.

Kerala. Tamilnadu.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes elongated. Culms erect, 30–60 cm long, 2–3 mm diam. Culm-internodes thin-walled, distally glabrous. Lateral branches lacking. Leaves 5–7 per branch. Leaf-sheaths ribbed, glabrous on surface or pilose, with reflexed hairs. Ligule an eci liate membrane, 1.5–5 mm long, pubescent on abaxial surface, truncate. Leaf-blades 6–15 cm long, 5–8 mm wide, aromatic. Leaf-blade surface pilose, hairy adaxially.


Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5.5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 4–4.5 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 5.5–6.5 mm long, 1.8–2.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret lanceolate or oblong, 5 mm long, membranous, without keels, 5 -veined, ciliate on margins, dentate, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, arising 0.65–0.85 way up back of lemma, 1 mm long. Lemma of upper sterile floret oblong, 5 mm long, membranous, ciliate on margins, dentate, 2 -fid, obtuse, awned. Awn of upper sterile floret dorsal,
arising 0.5 way up back of lemma, geniculate, 4–5.5 mm long. Fertile lemma oblong, 3 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex emarginate, mucitcous or mucronate. Palea oblong, 3 mm long, 1 length of lemma, 1 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 1.5 mm long, yellow. Stigmas 2, protogynous, pubescent. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica. Costa Rica.


**TYPE** from South Africa. **Basionym or Replaced Name:** *Hierochloe dregeana* Nees ex Trin., *Phalar.* 37 (1839). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: IT: J.F. Drège s.n., South Africa (L, MO).

**Illustrations (Books):** L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (92, Fig. 63).


**Classification.** Subfamily Pooidae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms erect, 20–60 cm long. Ligule an eciliate membrane. Leaf-blades flat or conduplicate, 12–25 cm long, 4–9 mm wide, stiff, aromatic. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence a panicule. Panicle spiciform, linear, continuous or interrupted, 4–8 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 4.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume oblong, 6–7 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, dissimilar, male or barren, with palea or without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 6 mm long, 2 length of fertile lemma, chartaceous, without keels, 5 -veined, pubescent, lobed, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, 3 mm long. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, pubescent, lobed, 2 -fid, obtuse, awned. Awn of upper sterile floret dorsal, geniculate, 9–10 mm long. Fertile lemma orbicular, 3 mm long, cartilaginous, dark brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 4.5 mm long. Stigmas 2, protogynous, pubescent. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Southern Africa. Western Cape.


**Illustrations (Books):** G.V.Pope et al., *Flora Zambesiaca* 10 (1(1971):73, t. 21), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (94, Fig. 64), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (44, Fig. 18).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely or moderately. Rhizomes elongated. Culms 35–80 cm long, swollen at the base, forming an ovoid corm. Ligule an eciliate membrane. Leaf-blades 7–25 cm long, 4–9 mm wide, aromatic.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear or oblong, 4–13 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 4.5–5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 6–8 mm long, 1.7–2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute, mucronate.

**Florets.** Basal sterile florets 2 or more, dissimilar, male or barren, with palea or without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 5 mm long, 1.3 length of fertile lemma, chartaceous, without keels, 5 -veined, pubescent, lobed, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, 2 mm long. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, pubescent, lobed, 2 -fid, obtuse, awned. Awn of upper sterile floret dorsal, geniculate, 6–7 mm long. Fertile lemma orbicular, 3.5–4 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1 -veined, without keels.


**Distribution (TDWG).** Continent: Africa.

**Country /Province /State.** South Tropical Africa, Southern Africa. Malawi.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Hierochloe*).


**Recent Synonyms:** *Hierochloe flexuosa* Hook. f., *Fl. Brit. Ind. 7: 222.* (1896).


**Derivation** (Clifford & Bostock 2007): L. *flecto*, bend; -*osa*, abundance. Inflorescence branches lax and drooping or bent in a zigzag fashion.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–60 cm long. Ligule an eciliate membrane. Leaf-blades 5–12 cm long, 2–4 mm wide. Leaf-blade apex abruptly acute.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 5 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 5 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, purple, 1-keeled, 3 -veined. Upper glume apex acute.
**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 5 mm long, chartaceous, 1-keeled, 5 -veined, pubescent, dentate, 2 -fid, obtuse, awned. Awn of lower sterile floret 1.5 mm long. Lemma of upper sterile floret oblong, 5 mm long, chartaceous, pubescent, lobed, 2 -fid, obtuse, awned. Awn of upper sterile floret dorsal, arising 0.5 way up back of lemma, geniculate, 5–6 mm long. Fertile lemma ovate, 3.5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 1 length of lemma, 1 -veined, without keels.

**Flower and Fruit.** Anthers 2 (bisexual) or 3 (male), 1.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. Eastern Himalaya.

Bhutan, Sikkim.


**TYPE** from Russia. **Basionym or Replaced Name:** *Hierochloe glabra* Trin., *Neue Entdeck. Pflanzenk.* 2: 66 (1821).


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 455).


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle open, oblong or pyramidal, 3–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 2.5–3 mm long, 1 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 2.5–3 mm long, 1.1–1.2 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 1 length of fertile lemma, coriaceous, dark brown, 1-keeled, 5 -veined, papillose, ciliate on margins, obtuse, muticous. Lemma of upper sterile floret oblong, 0.9 length of lower sterile floret, coriaceous, scabrous, ciliate on margins, dentate, 2 -fid, obtuse, muticous. Fertile lemma ovate, 2–2.5 mm long, membranous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface puberulous, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea 1 -veined, without keels.

**Flower and Fruit.** Anthers 2 (bisexual) or 3 (male). Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.


**Type** from Italy. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Italy.

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. slender. Culms or inflorescences slender.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 10–22 cm long. Lateral branches lacking or sparse. Leaf-sheaths loose or inflated, glabrous on surface. Ligule an eciliate membrane, 1.2–4 mm long, acute. Leaf-blades 1–7.5 cm long, 2–7 mm wide, aromatic. Leaf-blade margins ciliate. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle, comprising 4–9 fertile spikelets. Panicle contracted, linear or oblong, 1.5–3.5 cm long, 0.6–2 cm wide, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, ciliate.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 9–10 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 5.5–6.5 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 10–12 mm long, 4 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 6.5–9 mm long, 2.4–2.8 length of fertile lemma, chartaceous, without keels, 3 -veined, pilose, hairy below, lobed, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, pilose, lobed, 2 -fid, obtuse, awned. Awn of upper sterile floret dorsal, geniculate, 20–22 mm long. Fertile lemma orbicular, 2.7–3.2 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1 -veined, without keels.


2n = 10 (1 ref TROPICOS).

**Distribution (TDWG).** Continent: Europe, Africa, Temperate Asia.

**Region.** Southwestern Europe, Southeastern Europe.

**Country /Province /State.** : Sardinia. : Albania, Greece, Italy, Crete, Malta, Sicily. **Northern Africa.** Tunisia. **Western Asia.** East Aegean Is.


**Type** from Chile. Basionym or Replaced Name: *Hierochloe gunckelii* parodi, *Revista Mus. La Plata, Secc. Bot.* 3(14): 197, f. 5–6 (1941)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *Parodi 13643*, Sep 1940, Cultivated from Gunckel s.n. collected in Chile, Depto. Valdivia, Corral (Amargos) (BAA; IT: SI (fragm. ex BAA & photo)).


**Derivation** (Clifford & Bostock 2007): in honor of H. Gunckel (fl. 1931) who collected in Chile.

**Classification.** Subfamily Pooideae, Tribe: Poeae.
**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Basal innovations extravinal. Culms 50–100 cm long. Leaf-sheaths antrorsely scabr ous. Ligule an eciliate membrane, obtuse. Leaf-blades convolute, 15–35 cm long, 5–7 mm wide. Leaf-blade surface smooth or scaberulous, rough adaxially or on both sides.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate. laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret. Rhachilla elongation 1.5 mm long. Floret callus pilose.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 5–6 mm long, 0.8 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acute. Upper glume ovate, 6–7 mm long, membranous, 1-keeled, 3 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins all falling short of apex. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 5.5–7 mm long, chartaceous, 1-keeled, 5 -veined, scaberulous, eciliate on midvein or ciliolate on midvein, eciliate on margins or ciliolate on margins, fringed below, obtuse, awned. Awn of lower sterile floret subapical, 1 mm long. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, obtuse, awned. Awn of upper sterile floret dorsal, arising 0.33 way up back of lemma, straight, 2 mm long. Fertile florets female. Fertile lemma ovate, 4.3–4.8 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma midvein eciliate or ciliolate. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea linear, 1 -veined, without keels.

**Flower and Fruit.** Anthers 3, 3.5 mm long. Staminodes two present. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 1.5 mm long.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Southern South America. Argentina South, Chile Central, Chile South. Río Negro. Biobio, La Araucania. Los Lagos.


**Basionym or Replaced Name:** *Savastana hirta* Schrank, *Baier. Fl. I.:* 337 (1789). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Germany, Bavaria, Fohring: Wellmann (M neo).

**Recent Synonyms:** *Hierochloe hirta* (Schrank.) Borb., *A Balaton Floraja :*315 (1900).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Distribution (TDWG).** Continent. Europe.

**Region.** Eastern Europe.

**Country /Province /State.** Central European Russia.


Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 50–105 cm long. Culm-internodes thin-walled, distally glabrous. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.7–2 mm long. Leaf-blades 15–37 cm long, 5–10 mm wide, flaccid, aromatic. Leaf-blade surface glabrous, hairless throughout or except near base. Leaf-blade margins glabrous or ciliate.

Inflorescence. Inflorescence a panicle. Panicle spiciform, elliptic, continuous or interrupted, 3.5–13.5 cm long, 0.7–2.2 cm wide. Primary panicle branches 1–3 -nate, 1.5–5.4 cm long, bearing 5–28 fertile.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4.5–7.4 mm long, 1.3–2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 2.7–5.1 mm long, 0.5–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein eciliate or ciliolate. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume obovate, 4.4–7.3 mm long, 1.6–2.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein eciliate or ciliolate. Upper glume apex acute or acuminate.

**Florets.** Basal sterile florets 2 or more, dissimilar, male or barren, with palea or without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 3.7–6.4 mm long, membranous, without keels, 5 -veined, pubescent, hairy below, ciliate on margins, dentate, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, arising 0.6–0.8 way up back of lemma, 0.4–2.75 mm long. Lemma of upper sterile floret oblong, 3.6–5.8 mm long, membranous, pubescent, ciliate on margins, dentate, 2 -fid, obtuse, awned. Awn of upper sterile floret dorsal, arising 0.25–0.5 way up back of lemma, geniculate, 4–9.2 mm long. Fertile lemma oblong, 2.3–3.5 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex emarginate, mucous or mucronate or awned, 1 -awned. Principal lemma awn 0–3.5 mm long overall. Palea linear, 2–3.4 mm long, 1 -veined, without keels.

**Flower and Fruit.** Lodicles absent. Anthers 2. 1.8–3.6 mm long. Stigmas 2, protogynous, pubescent. Caryopsis with adherent pericarp, lanceolate or oblong, 1.6–2.2 mm long. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Anthoxanthum japonicum** (Maxim.) Hackel ex Matsumura. *Bot. Mag., Tokyo,* 11:443 (1897).


**Illustrations (Books):** T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (224, Fig. 81), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (254 as *A. formosanum*), C-C Hsu,*Taiwan Grasses* (1975) (406, Pl. 1378 as *A. formosanum*).

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to; Japan, a modified spelling Zhapan introduced into Europe by Marco Polo as a transliteration for the Chinese name for the large islands to the east of that country. From Japan.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Rhizomes short. Culms slender, 26–65 cm long, 1–1.2 mm diam., 3–5 -noded. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 2–6 mm long, truncate or obtuse or acute. Leaf-blades linear or lanceolate, 12–20 cm long, 4–10 mm wide, aromatic. Leaf-blade surface smooth, pubescent, sparsely hairy, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or oblong, laterally compressed, compressed slightly, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes elongated below proximal fertile floret. Rachilla elongation 0.7–1 mm long.
**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3–4 mm long, 0.66 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 5–7 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 5–7 mm long, chartaceous, without keels, 5 -veined, pilose, dentate, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, arising 0.5 way up back of lemma, 1.5–2 mm long. Lemma of upper sterile floret oblong, 5–7 mm long, chartaceous, pilose, dentate, 2 -fid, obtuse, awned. Awn of upper sterile floret dorsal, arising 0.25 way up back of lemma, 1.5–2 mm long. Fertile lemma elliptic or ovate, 2.5–3 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex emarginate. Palea oblong, 1 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 2–2.5 mm long. Stigmas 2, protogynous, pubescent. Caryopsis with adherent pericarp. Hilum punctiform.

2n = 70 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China, Eastern Asia. Japan Shikoku. Japan, Taiwan.


**TYPE** from Argentina. **Basionym or Replaced Name:** Hierochloe utriculata var. juncifolia Hack., *Anales Mus. Nac. Buenos Aires* 21: 64 (1911)


**Derivation** (Clifford & Bostock 2007): L. juncea, rush-like; folium, leaf. With rush-like leaf-blades or culms.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Cataphylls evident. Culms 30–80 cm long. Leaf-sheaths longer than adjacent culm internode, smooth or scabrous. Ligule a ciliolate membrane, 1–4 mm long, obtuse. Leaf-blades filiform, convolute, 7–35 cm long, 1–2 mm wide, stiff. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade apex pungent.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 5.5–6.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume ovate, 5.5–6.5 mm long, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 5–6.5 mm long, chartaceous, 1-keeled, 5 -veined, ciliolate on margins, obtuse, mucronate. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, ciliolate on margins, obtuse, awned. Awn of upper sterile floret dorsal, arising 0.75 way up back of lemma, geniculate, 1.5–4 mm long. Fertile florets female. Fertile lemma ovate, 4–4.5 mm long,
cartilaginous, without keel, 5 -veined, more than 3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea linear, 1 -veined, without keels.

**Flower and Fruit.** Anthers 3, 2.5–4 mm long. Staminodes two present. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Southern South America. Argentina South, Chile Central, Chile South.

Chubut, Neuquén, Río Negro. La Araucania. Los Lagos.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *latus*, broad; *folium*, leaf. Leaf-blades broad or relatively broad with respect to related species.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central.


**Accepted by:** R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Hierochloe*).

**TYPE** from India. **Basionym or Replaced Name:** *Hierochloe laxa* R. Br. ex Hook. f., *Fl. Brit. India* 7(21): 222 (1897)


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. loose. Inflorescence much branched either as a single panicle or from branching of the culms.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Culms erect, 20–75 cm long. Ligule an eciliate membrane, 0.75–2.5 mm long. Leaf-blades 2.5–17 cm long, 4–14 mm wide, aromatic. Leaf-blade surface glabrous.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 4–7 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 4–7 mm long, 1.3–1.8 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 4.5–5.5 mm long, 1.5 length of fertile lemma, membranous, 1-keeled, 5 -veined, ciliolate on margins, emarginate or truncate, awned. Awn of lower sterile floret dorsal, 0.5–3 mm long. Fertile lemma ovate, 3–4 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins convolute, covering most of palea,
ciliate. Lemma apex acute, muticous or awned, 1-awned. Principal lemma awn 0–2 mm long overall. Palea elliptic, 1-veined, 1-keeled.

**Flower and Fruit.** Lodicules 2. Anthers 2 (bisexual) or 3 (male). Stigmas plumose. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**Type from Madagascar.** T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Madagascar., *Baron 2050, 4098* (ST: K).

**Illustrations (Books):** J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (62, Fig. 12).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths herbaceous. Culms erect, 15–60 cm long. Lateral branches lacking. Leaf-sheaths smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, 1–2 mm long, truncate. Leaf-blades 2.5–10 cm long, 3–4 mm wide, stiff, aromatic. Leaf-blade surface smooth or scaberulous, glabrous. Leaf-blade margins ciliate. Leaf-blade apex acute.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–4.5 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 5–5.5 mm long, 2.5 length of adjacent fertile lemma, membranous, 1-keeled, 3-veined. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 4.5 mm long, chartaceous, without keels, 5-veined, pubescent, emarginate, awned. Awn of lower sterile floret 1 mm long. Lemma of upper sterile floret oblong, 4.5 mm long, chartaceous, pubescent, dentate, 2-fid, obtuse, awned. Awn of upper sterile floret dorsal, arising 0.5 way up back of lemma, geniculate, 4–5 mm long. Fertile lemma oblong, 2 mm long, cartilaginous, without keel, 5-veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1-veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 2 mm long. Stigmas 2, protogynous, pubescent. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Western Indian Ocean. Madagascar.


**Type from Mexico.** Basionym or Replaced Name: *Ataxia mexicana* Rupr. ex E. Fourn., *Mexic. Pl.* 2: 71 (1886)


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret. Rachilla elongation 0.2 mm long.

Glumess. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3.5–4 mm long, 0.66 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 5–6 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume surface asperulous. Upper glume apex acute.

Florets. Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 5 mm long, chartaceous, without keels, 5 -veined, pubescent, bearing tawny hairs, dentate, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, arising 0.75 way up back of lemma, 1–1.5 mm long. Lemma of upper sterile floret oblong, 5 mm long, chartaceous, pubescent, dentate, 2 -fid, obtuse, awned. Awn of upper sterile floret dorsal, arising 0.25 way up back of lemma, geniculate, 6–7 mm long. Fertile lemma oblong, 2.5 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 -veined, without keels.


**Anthoxanthum monticola** (Sw.) Roem. & Schult. Syst. ii. 515. (1817).


**TYPE** from Sweden. Basionym or Replaced Name: Holcus alpinus Sw. ex Willd., Sp. Pl. 4(2): 937 (1806)


Derivation (Clifford & Bostock 2007): L. alpes, high mountain; -ina, belonging to. Species growing at high altitudes.


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 20–40 cm long. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane, 0.6 mm long. Leaf-blades involute, 1–2 mm wide, aromatic. Leaf-blade surface pubescent, hairy abaxially.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 5–8 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 5–8 mm long. 1 length of upper glume, membranous, 1-keeled, 3-veined. Lower glume apex acute. Upper glume ovate, 5–8 mm long, membranous, 1-keeled, 3-veined. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, dissimilar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 1 length of fertile lemma, chartaceous, 1-keeled, 5-veined, pubescent, dentate, 2-fid, obtuse, awned. Awn of lower sterile floret 2–4 mm long. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, pubescent, lobed, 2-fid, obtuse, awned. Awn of upper sterile floret geniculate, 4–8 mm long. Fertile lemma ovate, 5–8 mm long, cartilaginous, without keel, more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 1-veined, without keels.

**Flower and Fruit.** Anthers 2 (bisexual) or 3 (male), 1.2 mm long. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: Europe, Temperate Asia, North America.

**Region.** Northern Europe, Eastern Europe.


**TYPE** from Germany. **Basionym or Replaced Name:** *Holcus odoratus* L., *Sp. Pl.* 2: 1048 (1753)


**Derivation** (Clifford & Bostock 2007): *L. nitens*, shine. Spikelets or lemmas glossy at maturity.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms erect, 20–50 cm long. Ligule an eciliate membrane, 1.5–5(–6.5) mm long. Leaf-blades 18–30 cm long, 4–10 mm wide, aromatic. Leaf-blade margins scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 4–11 cm long. Primary panicle branches spreading, 2–4.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–4 mm long, glabrous.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma, shiny. Lower glume ovate, 4–6 mm long, 1 length of upper glume, membranous, 1-keeled,
1–3 -veined. Lower glume apex obtuse. Upper glume ovate, 4–6 mm long, 1.2–1.6 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume apex obtuse.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 3.5–4.5 mm long, 1.2 length of fertile lemma, membranous, 1-keeled, 5 -veined, puberulous, ciliolate on margins, obtuse. Palea of lower sterile floret scabrous. Fertile lemma ovate, 3 mm long, cartilaginous, shiny, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 0.8 length of lemma, 1 -veined, without keels.

**Flower and Fruit.** Lodicules 2. Anthers 2 (bisexual) or 3 (male), 1– 3 mm long (bisexual 1–2mm, male 2–3mm). Stigmas plumose. Ovary glabrous. Caryopsis with adherent pericarp, ellipsoid. Embryo 0.5 length of caryopsis. Hilum linear.

**Distribution (TDWG). Continent.** Europe, Temperate Asia, North America.

**Region.** Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, and Eastern Europe.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Derivation** (Clifford & Bostock 2007): L. *nix*, snow; -ale, pertaining to. Growing near to permanent snow line.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Butt sheaths papery, persistent and investing base of culm, with soft dead sheaths. Culms erect, 25–90 cm long. Leaves mostly basal. Ligule an eciliate membrane, 5 mm long. Leaf-blades 8–25 cm long, 4–10 mm wide, aromatic. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade apex obtuse or abruptly acute.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, linear or oblong, continuous or interrupted, 5–15 cm long, 1–1.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, pubescent.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 4–5 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume elliptic, 7–9 mm long, 3–4 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 3 -veined. Upper glume primary vein smooth or scabrous. Upper glume apex acuminate.

**Florets.** Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 3.5–5 mm long, 1.5–2 length of fertile lemma, membranous, without keels, 5 -veined, pilose, lobed, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, arising 0.6 way up back of lemma, 1–3 mm long. Lemma of upper sterile floret oblong, 3.5–5 mm long, 1 length of lower sterile floret, membranous, pilose, lobed, 2 -fid, obtuse, awned. Awn of upper
sterile floret dorsal, arising 0.33 way up back of lemma, geniculate, 5–8 mm long. Fertile lemma orbiculate, 2.5 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 2–4.5 mm long. Stigmas 2, protogynous, pubescent. Caryopsis with adherent pericarp, ellipsoid. Embryo 0.33 length of caryopsis. Hilum punctiform.

**Distribution (TDWG).** Continent. Africa.


**TYPE** from USA. Basionym or Replaced Name: *Hierochloe occidentalis* Buckley, *Proc. Acad. Nat. Sci. Philadelphia* 14: 100 (1862)


**Derivation** (Clifford & Bostock 2007): L. occident, west; -ale, pertaining to.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms 60–90 cm long. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 3–6 mm long, pubescent on abaxial surface, erose, obtuse or acute. Leaf-blades 20–40 cm long, 7–12 mm wide, aromatic. Leaf-blade venation prominent, with distinct cross veins. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 8–13 cm long, bearing few spikelets. Primary panicle branches drooping. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma, shiny. Lower glume ovate, 4 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 4 mm long, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 4.5 mm long, 0.9 length of fertile lemma, chartaceous, 1-keeled, 5 -veined, puberulous, ciliate on margins, dentate, 2 -fid, obtuse, mucituous or mucronate. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, pubescent, ciliate on margins, lobed, 2 -fid, obtuse, mucituous or mucronate. Fertile lemma ovate, 4.5 mm long, cartilaginous, shiny, without keel, more than 3-veined. Lemma surface puberulous, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 1 -veined, without keels.

**Flower and Fruit.** Anthers 2 ( bisexual) or 3 (male), 2.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Northwest USA, Southwestern USA. Oregon, Washington. California.


E.Edgar & H.E.Connor, geniculately ascending, 10–75(–100) cm long, 1–3-noded. Lateral branches lacking. Leaves mostly basal.

Klein, Flora Costaricensis

Hierochloe hirta (Schrank.) Borb., A Balaton Flora: 315 (1900).


Recent Synonyms: Hierochloe hirta (Schrank.) Borb.


Illustrations (Journals): Ruizia (13:166, Fig 18d-f (1993)).


Derivation (Clifford & Bostock 2007): L. odora, fragrance; -ata, possessing. Strongly scented with coumarin.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths papery, withering. Culms erect or geniculately ascending, 10–75(–100) cm long, 1–3 -noded. Lateral branches lacking. Leaves mostly basal. Ligule an eciliate membrane, 1–5(–7) mm long. Leaf-blades 1–12(–30) cm long, 1.5–5(–9) mm wide, aromatic. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle scipiform, oblong or ovate, continuous or interrupted, 1–12 cm long, 0.6–1.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5–1 mm long, pubescent.

Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 7–9.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 3.7–5.2 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth. Lower glume lateral veins absent. Lower glume surface pubescent. Lower glume apex acuminate. Upper glume elliptic, 7–9.5 mm long, 3–5 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 3 -veined. Upper glume primary vein smooth. Upper glume surface pubescent. Upper glume apex acuminate.

Florets. Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 2.8–3.6 mm long, 1.5–2 length of fertile lemma, membranous, without keels, 4–5 -veined, pilose, emarginate, awned. Awn of lower sterile floret
dorsal, arising 0.6 way up back of lemma, 2–4 mm long. Lemma of upper sterile floret oblong, 3–3.5 mm long, 1 length of lower sterile floret, membranous, pilose, emarginate, awned. Awn of upper sterile floret dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 6–9 mm long. Fertile lemma orbicular, 1.7–2.4 mm long, cartilaginous, shiny, without keel, 5−veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1-veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, (2.9–)3.5–4.8(–5.5) mm long. Stigmas 2, protogynous, pubescent. Caryopsis with adherent pericarp, ellipsoid, 2 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

\[ n = 4 \] (4 refs TROPICOS). \[ n = 10 \] (2 refs TROPICOS), or 20 (13 refs TROPICOS).

**Distribution (TDWG).** **Continent.** Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America, South America, Antarctica.

**Region.** Northern Europe. Middle Europe, Southwestern Europe, Northwestern Europe, Eastern Europe.


**Anthoxanthum ovatum** Lag. *Elench.* 2. n. 15. (1816).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *ovum*, egg; -ata, possessing. Inflorescences, spikelets, or leaf-blades ovate in outline.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 25–55 cm long. Lateral branches lacking. Leaves mostly basal. Ligule an eciliate membrane, 0.7–3 mm long. Leaf-blades 7–50 cm long, 1–5 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 2.7–4 mm long, 0.66 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate or ovate, 4.5–7 mm long, 2.5–3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acuminate.

**Florets.** Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 3.5–4.1 mm long, 1.5–2 length of fertile lemma, scarious, without keels, pilose, dentate, 2 -fid, obtuse, awned. Awn of lower sterile floret dorsal, 4–5 mm long. Lemma of upper sterile floret oblong, 3.5–4.1 mm long, 1 length of lower sterile floret, scarious, pilose, dentate, 2 -fid, obtuse, awned. Awn of upper sterile floret dorsal, geniculate, 8–11 mm long. Fertile lemma ovate or orbicular, 1.5–1.7 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 2.3–3.5 mm long. Stigmas 2, protogynous, pubescent. Caryopsis with adherent pericarp, ellipsoid, 1.5–1.6 mm long. Hilum punctiform.

2n = 10.

**Distribution (TDWG).** Continent. Europe.

**Region.** Northern Europe (*). Southwestern Europe, Southeastern Europe.

**Country /Province /State.** : GB Aliens (Ryves et al).

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**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L. pale-colored. Spikelets or grain pale-green.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 2.5–4 cm long, 0.4–0.5 cm wide. Primary panicle branches 1–2 -nate, 0.5–1 cm long, bearing 1–5 fertile spikelets on each lower branch. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 1.5 mm long, 0.5–0.6 length of upper glume, membranous, pallid, 1-keeled, 3 -veined. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 3 mm long, 2 length of adjacent fertile lemma, membranous, pallid, 1-keeled, 3 -veined. Upper glume surface pubescent. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret linear, membranous, light brown, without keels, scaberulous, puberulous, dentate, 2 -fid. Lemma of upper sterile floret linear, membranous, scabrous, pubescent, dentate, 2 -fid, awned. Awn of upper sterile floret dorsal, 1 mm long. Fertile lemma ovate, 1.5 mm long, cartilaginous, dark brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1 -veined, without keels.


TYPE from ?China. Basionym or Replaced Name: Hierochloa pauciflora. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Montium Babuna-Planina et Kajmakcalan (Nidze-Plania), Dom Pilcz s.n..

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. paucus, few; flos, flower. Florets few per spikelet.


Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 1.5–3 cm long, bearing few spikelets. Primary panicle branches appressed, bearing 1–2 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma, shiny. Lower glume ovate, 2.5 mm long, 0.75 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 3.5–4.5 mm long, 0.9 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 1 length of fertile lemma, membranous, 1-keeled, 5 -veined, scabrous, entire, acute, muticus or mucronate. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, membranous, scabrous, entire, acute, muticus or mucronate. Fertile lemma ovate, 4–5 mm long, cartilaginous, without keel, more than 3-veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 3 -veined, without keels.

Flower and Fruit. Anthers 2 (bisexual) or 3 (male). Ovary glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Europe.
Region. Eastern Europe.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online (as Hierochloe).

TYPE from Japan. Basionym or Replaced Name: Hierochloe pluriflora Koidz., Bot. Mag. (Tokyo) 31: 136 (1917)


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. plus, several; flos, flower. Florets several per spikelet.

**Habit, Vegetative Morphology.** Perennial, culms solitary. Rhizomes elongated. Culms 18–40 cm long, 1–1.2 mm diam. Ligule a ciliolate membrane. Leaf-blades involute, 25–40 cm long, 4–6 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, 2–3 cm long, 1–1.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 5–6 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 5–6 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex obtuse.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 4.5–5.5 mm long, chartaceous, 1-keeled, 5 -veined, pubescent, ciliate on margins, obtuse, muticus or mucronate or awned. Awn of lower sterile floret 0–2 mm long. Lemma of upper sterile floret oblong, 4.5–5.5 mm long, chartaceous, pubescent, ciliate on margins, muticus or mucronate or awned. Fertile lemma ovate, 4–5 mm long, cartilaginous, without keel, more than 3-veined. Lemma surface pubescent, hairy at base. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 1 -veined, without keels.

**Flower and Fruit.** Anthers 2 (bisexual) or 3 (male). Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 455).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Rhizomes short. Culms erect, 50–120 cm long. Culm-internodes smooth. Leaf-sheaths smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, 4–8 mm long. Leaf-blades flat, 8–15 cm long, 6–14 mm wide. Leaf-blade surface smooth or scaberulous, rough adaxially, glabrous.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 2–4 mm long, 0.5–0.7 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth, glabrous. Lower glume apex obtuse or acute. Upper glume lanceolate, 3–6 mm long, membranous, 1-keeled, 3 -veined. Upper glume primary vein smooth. Upper glume surface glabrous. Upper glume apex obtuse or acute.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret lanceolate, 4–6 mm long, chartaceous, 1-keeled, 5 -veined, scabrous, ciliate on margins, emarginate. Lemma of upper sterile floret lanceolate, 4–6 mm long, chartaceous, scabrous, ciliate on margins, emarginate, awned. Awn of upper sterile floret 2–4 mm long. Fertile lemma lanceolate, 3 mm long, cartilaginous, shiny, without keel. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea 1 -veined, without keels.
**Flower and Fruit.** Lodicules 2. Anthers 2 (bisexual) or 3 (male), 2–3.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China North-Central. Gansu.


**Derivation (Clifford & Bostock 2007):** L. very small. Plants of small stature.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Culms 5–10 cm long. Leaf-sheaths inflated, pubescent. Ligule an eciliate membrane, erose, truncate. Leaf-blades curved, flat or conduplicate, 1–3 cm long, 2–3 mm wide. Leaf-blade surface puberulous, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Peduncle pubescent above. Panicle spiciform, oblong, 1–2 cm long, 0.7–1 cm wide, bearing few spikelets. Panicle axis smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent, hairy at tip.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 4.5–5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein extending to apex. Lower glume apex obtuse. Upper glume ovate, 4.5–5 mm long, membranous, 1-keeled, 3 -veined. Upper glume lateral veins all falling short of apex. Upper glume apex obtuse.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 5 mm long, chartaceous, 1-keeled, 5 -veined, scaberulous, rough above, truncate or obtuse, muticous. Palea of lower sterile floret 3.5 mm long. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, scabrous, truncate or obtuse, muticous. Fertile florets female. Fertile lemma ovate, 3–3.5 mm long, cartilaginous, light brown, without keel, 5 -veined, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea linear, 1 -veined, without keels.

**Flower and Fruit.** Anthers 3, 2.5 mm long. Staminodes two present. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Southern South America. Argentina South, Chile South. Santa Cruz, Tierra del Fuego. Magellanes.


**Accepted by:** W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as Hierochloe).

**TYPE from Australia. Basionym or Replaced Name:** Hierochloe rariflora Hook. f., *Fl. Antarct.* 1: 93 (1844)

**. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Hooker s.n., Australia (K).**
Illustrations: None found.
Derivation (Clifford & Bostock 2007): L. rarus, far apart; flos, flower.
Habit, Vegetative Morphology. Perennial. Rootstock evident. Cataphylls evident. Basal innovations extravaginal. Culms geniculately ascending or decumbent, 60–100 cm long, wiry. Lateral branches ample. Ligule an eciliate membrane, 1 mm long. Leaf-blades deciduous at the ligule, flat or convolute, 10–20 cm long, 2–9 mm wide, aromatic. Leaf-blade apex acuminate, filiform.
Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret.
Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 2.5 mm long, 1 length of upper glume, herbaceous, 1-keeled, 3 -veined. Lower glume margins ciliate. Lower glume apex obtuse. Upper glume oblate, 2.5 mm long, 0.5 length of adjacent fertile lemma, herbaceous, 1-keeled, 3 -veined. Upper glume margins ciliate. Upper glume apex obtuse.
Florets. Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 4.5–5 mm long, 1 length of fertile lemma, membranous, 1-keeled, 5 -veined, scaberulous, rough above, ciliolate on margins, obtuse, muticous. Fertile lemma ovate, 4.5–5 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 1 -veined, 1-keeled.


TYPE from Tierra del Fuego. Basionym or Replaced Name: Holcus redolens Vahl, Symb. Bot. 2: 102 (1791)


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets or exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 5–8 mm long, 1 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 5–8 mm long, 1.1–1.8 length of adjacent fertile lemma, hyaline, 1-keeled, 3 -veined. Upper glume apex obtuse or acute.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 6.5 mm long, 1.5 length of fertile lemma, chartaceous, 1-keeled, 5 -veined, scaberulous, ciliolate on margins, obtuse, awned. Awn of lower sterile floret dorsal. Fertile lemma ovate, 4.5 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 1 -veined, 1-keeled.

**Flower and Fruit.** Lodicles 2. Anthers 2 (bisexual) or 3 (male), 1.5–3.5 mm long. Stigmas plumose. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** Tropical Asia, Australasia, South America, Antarctica.


Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. Coquimbo, Biobio. Los Lagos, Aisen, Magallanes.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Hierochloe*).

**TYPE** from Austria. **Basionym or Replaced Name:** *Holcus repens* Host, *Icon. Descr. Gram. Austriac.* 3: 3 (1805)


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): *L. repo*, crawl. Rhizome well developed.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, mat forming. Rhizomes elongated. Butt sheaths grey. Culms 20–50 cm long. Ligule an eciliate membrane, 2–3.5 mm long. Leaf-blades 7–9 mm wide, pruinose, aromatic.

**Inflorescence.** Inflorescence a panicle, comprising 120–160 fertile spikelets. Panicle open, ovate, 6.5–10 cm long. Primary panicle branches 1–2 -nate. Panicle axis 11–12 noded. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, puberulous, hairy at tip, with 0.1–0.3 mm long hairs.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.4–4.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.3–0.6 mm long.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 3.4–4.2 mm long, 1 length of upper glume, membranous, 1-keeled. Lower glume apex acute. Upper glume ovate, 3.4–4.7 mm long, 1.2–1.4 length of adjacent fertile lemma, membranous, 1-keeled. Upper glume apex acute.
**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 3.3–3.8 mm long, chartaceous, 1-keeled, 5-veined, ciliate on margins, entire or dentate, 2-fid, mucronate or awned. Awn of lower sterile floret terminal or subapical, 0.2–0.5 mm long. Lemma of upper sterile floret oblong. 3.3–3.8 mm long, chartaceous, ciliate on margins, entire or dentate, 2-fid, mucronate or awned. Awn of upper sterile floret terminal or subapical, straight, 0.2–0.5 mm long. Fertile lemma ovate, 2.5–3.5 mm long, cartilaginous, without keel, more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea 1-veined, without keels.

**Flower and Fruit.** Anthers 2 (bisexual) or 3 (male), 1.6–2.7 mm long. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Europe, Temperate Asia.

**Region.** Middle Europe, Southeastern Europe, Eastern Europe.

**Country /Province /State.** Austria, Czechoslovakia, Hungary. : Bulgaria, Romania. Central European Russia, East European Russia, Northwest European Russia. **Caucasus.** North Caucasus.


**Derivation (Clifford & Bostock 2007):** L. -ense, denoting origin. From Sikkim.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms weak, 15–30 cm long. Lateral branches lacking. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 2 mm long, erose. Leaf-blades 5–10 cm long. 1–2 mm wide, flaccid, aromatic. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 2–5.5 cm long, 1 cm wide. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 5.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3 mm long. 0.5 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acutate. Upper glume lanceolate, 5.5 mm long. 1.5 length of adjacent fertile lemma, membranous, with scarious margins, 1-keeled, 3-veined. Upper glume primary vein scabrous. Upper glume apex acuminate, mucronate.

**Florets.** Basal sterile florets 2 or more, dissimilar, barren, without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 5 mm long, chartaceous, without keels, 5-veined, pubescent, dentate, 2-fid, obtuse, awned. Awn of lower sterile floret dorsal, 2–4 mm long. Lemma of upper sterile floret oblong, 5 mm long, chartaceous, pubescent, dentate, 2-fid, obtuse, awned. Awn of upper sterile floret dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 9 mm long. Fertile lemma oblong, 3.5 mm long, cartilaginous, without keel, 5-veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex emarginate. Palea oblong, 1-veined, without keels.


**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Accepted by:** W.D. Clayton & K. Harman, GrassBase (2008) and online (as *Hierochloe*).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *sub*, almost; *mutica*, blunt.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets or exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 5–6 mm long, 1 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 5–6 mm long, 1.1–1.8 length of adjacent fertile lemma, hyaline, 1-keeled, 3 -veined. Upper glume apex obtuse or acute.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 5.5 mm long, 1.5 length of fertile lemma, chartaceous, 1-keeled, 5 -veined, scaberulous, ciliolate on margins, obtuse, muticous or mucronate. Fertile lemma ovate, 3.5 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea elliptic, 1 -veined, 1-keeled.

**Flower and Fruit.** Lodicles 2. Anthers 2 (bisexual) or 3 (male). Stigmas plumose. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: Australasia.

**Country/Province/State.** Australia. New South Wales, A.C.T., Victoria, Tasmania.

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**TYPE** from China. **Basionym or Replaced Name:** *Hierochloe tibetica* Bor, *Kew Bull.* 8(2): 271–272 (1953)


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *-ica*, belonging to. From Tibet.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

Inflorescence. Inflorescence a panicle, comprising 10 fertile spikelets. Panicle open, dense, 2.5 cm long, 1 cm wide, bearing few spikelets. Panicle branches pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or cuneate, laterally compressed, truncate, 5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 5 mm long, 1 length of upper glume, membranous, much thinner above, purple, 1-keeled, 3-veined. Lower glume apex acute. Upper glume elliptic, 5 mm long, 1.2 length of adjacent fertile lemma, membranous, much thinner above, purple, 1-keeled, 3-veined. Upper glume apex acute.

Florets. Basal sterile florets 2 or more, dissimilar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 4 mm long, 1 length of fertile lemma, membranous, glabrous or pubescent, bearing yellow hairs, lobed, 2-fid, obtuse. Palea of lower sterile floret pubescent at apex. Lemma of upper sterile floret oblong, 4 mm long, 1 length of lower sterile floret, membranous, pubescent, lobed, 2-fid, awned. Awn of upper sterile floret 3 mm long. Fertile lemma elliptic or oblong, 2.5 mm long, cartilaginous, without keel. Lemma surface pubescent, hairy above. Lemma margins convolute, covering most of palea. Lemma hairs yellow. Lemma apex obtuse or acute. Palea 1-keeled, without keels.

Flower and Fruit. Lodicules 2. Anthers 2 (bisexual) or 3 (male), 1–1.25 mm long. Ovary glabrous. Caryopsis with adherent pericarp.


Illustrations (Books): L.K.A. Chippindall, Grasses and Pastures of South Africa (1955) (91, Fig. 62).

Derivation (Clifford & Bostock 2007): on account of it having the scent of the tongo bean (Dipteryx odorata).


Habit, Vegetative Morphology. Perennial, mat forming or caespitose. Culms decumbent or rambling, weak, 10–40 cm long. Ligule an eciliate membrane. Leaf-blades filiform, 2–10(–17) cm long, 1–2 mm wide, aromatic.


Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 4.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3–5-veined. Lower glume apex acute, mucronate. Upper glume oblong, 5–7 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 3-veined. Upper glume apex acute.

Florets. Basal sterile florets 2 or more, dissimilar, barren (or lower male), without significant palea, attached to and deciduous with the fertile. Lemma of lower sterile floret oblong, 4–5 mm long, 2 length of fertile lemma, chartaceous, without keels, 5-veined, pubescent, lobed, 2-fid, obtuse, awned. Awn of lower sterile floret dorsal, 2–4 mm long. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, pubescent, lobed, 2-fid, obtuse, awned. Awn of upper sterile floret dorsal, geniculate, 10–13 mm long. Fertile lemma orbicular, 2.5 mm long, cartilaginous, shiny, without keel, 5-veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea oblong, 1 length of lemma, 1-veined, without keels.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Southern Africa. Western Cape.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 5–6 mm long, 0.9 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume apex obtuse. Upper glume ovate, 5.5–6.5 mm long, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex obtuse.

**Florets.** Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 5–6 mm long, chartaceous, 1-keeled, 5 -veined, scabrous, ciliolate on midvein, obtuse, awned. Awn of lower sterile floret terminal, 0.5–1.5 mm long. Lemma of upper sterile floret oblong, 1 length of lower sterile floret, chartaceous, scabrous, ciliolate on midvein, obtuse, awned. Awn of upper sterile floret terminal, straight, 0.5–1.5 mm long. Fertile florets female. Fertile lemma ovate, 4 mm long, cartilagineous, without keel, 5 -veined, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma apex acute, muticous or mucronate. Palea linear, 1 -veined, without keels.

**Flower and Fruit.** Anthers 3, 2.5–4 mm long. Stamnodes two present. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Southern South America. Argentina South, Chile South. Neuquén. Rest of Chile- Biobío, La Auracania, Maule, O'Higgins, Santardo, Valpariso. Aisen.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Hierochloe*).


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–60 cm long. Leaf-blades 3–12 cm long, 3.5–9 mm wide, aromatic.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, dense, 3.5–7.5 cm long. Primary panicle branches bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets or exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 3–5.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 3–5.5 mm long, 1–1.4 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 2 or more, similar, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 3.5–5 mm long, 1.2–1.3 length of fertile lemma, membranous, 1-keeled, 5 -veined, ciliolate on margins, dentate, 2 -fid, obtuse, awned. Awn of lower sterile floret 0.5–2 mm long. Fertile lemma ovate, 3–4 mm long, cartilaginous, shiny, without keel, 5 -veined, more than 3 -veined. Lemma surface pubescent, hairy above. Lemma margins convolute, covering most of palea, ciliolate. Lemma apex acute, muticous or mucronate. Palea elliptic, 1 -veined, 1-keeled.


Derivation (Clifford & Bostock 2007): Gk. -idea, resembling. Similar to Agrostis in habit or inflorescence.


Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms geniculately ascending or decumbent, 5–30 cm long, without nodal roots or rooting from lower nodes. Leaf-sheaths smooth. Ligule an eciliate membrane, 3 mm long, lacerate. Leaf-blades 2–12 cm long, 1–2.5 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.


Fertile Spikelets. Spikelets comprising 2 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.5–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes definite.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny. Lower glume ovate, 1.5–2 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume
primary vein scaberulous. Lower glume apex obtuse. Upper glume ovate, 1.5–2 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex obtuse.

**Florets.** Fertile lemma elliptic, 0.7–0.8 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma apex dentate, 3 -fid, truncate. Palea linear, 1 length of lemma.

**Flower and Fruit.** Anthers 3, 0.5–0.7 mm long. Caryopsis with adherent pericarp, obovoid, dorsally compressed, plano-convex.

\[2n = 14\] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa.

**Region.** Southwestern Europe, Eastern Europe.

**Country /Province /State.** : France, Portugal, Spain. Krym, Ukraine. **Northern Africa.** Algeria, Libya, Morocco, Tunisia.

**Antinoria insularis** Parl. Fl. Palerm. 1: 94 (1845).


**TYPE** from Sicily. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Sicily, Dingoli: Guccione (NAP syn).

**Illustrations (Books):** N.Feinbrun-Dothan, Flora Palaestina 4 (1986) (Pl. 26).

**Derivation** (Clifford & Bostock 2007): L. insula, island; -are, pertaining to. Island species.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or decumbent, 5–30 cm long. Ligule an eciliate membrane, 1.5–3 mm long. Leaf-blades 2–12 cm long, 1–2.5 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a spike. Panicle open, ovate, 2–10 cm long, 0.5–7 cm wide. Primary panicle branches 1.5–4 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1.5–3.8 mm long, glabrous, tip pyriform.

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.3–1.6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes definite.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume ovate, 1.3–1.6 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 1.3–1.6 mm long, 1.6 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex obtuse.

**Florets.** Fertile lemma elliptic, 0.8–1 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma apex dentate, 3 -fid. Palea linear, 1 length of lemma.

**Flower and Fruit.** Anthers 3, 0.5–0.7 mm long. Caryopsis with adherent pericarp, obovoid, dorsally compressed, plano-convex.

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia.

**Region.** Southwestern Europe, Southeastern Europe.

**Country /Province /State.** : Corsica, Sardinia. : Italy, Crete, Sicily. **Northern Africa.** Libya. **Western Asia.** Lebanon-Syria, Palestine, Israel & Jordan, Turkey.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

**TYPE** from Turkey, Koycegiz to Gokova: Leblebici, Secmen & Bekat 2857 (EGE holo, ISTE).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Asuman Baytop (-) Turkish pharmacist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, culms solitary or caespitose. Culms erect or geniculately ascending, 16–41 cm long, 3–4 -noded. Culm-internodes smooth, distally glabrous. Leaf-sheaths mostly
shorter than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 1.2–3.7 mm long, lacerate, acuminate. Leaf-blades flat or involute, 2.5–7 cm long, 0.7–1.5 mm wide. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or lanceolate, 2.2–6.2 cm long, 0.5–1.7 cm wide. Primary panicle branches appressed, 0.4–1.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–1.1 mm long, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.4–2.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume linear, 1.9–2 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1-awned, aawn terminal, aawn 0.8–1.5 mm long. Upper glume lanceolate, 2.5–2.7 mm long, 1.3–1.6 length of adjacent fertile lemma, membranous, 1-keeled, 3-veined. Upper glume apex acuminate, awned, 1-awned, aawn terminal, aawn 0.4–0.7 mm long.

**Florets.** Fertile lemma lanceolate, 1.5–2.1 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma surface scaberulous. Lemma apex acute, awned, 1-awned. Principal lemma awn subapical, straight, 1–2.3 mm long overall. Palea 1.4–1.6 mm long, 2-veined.

**Flower and Fruit.** Anthers 3, 1.4–1.8 mm long. Caryopsis with adherent pericarp.

2n = 14 (1 ref TROPICOS). **Distribution (TDWG).** Continent. Temperate Asia. **Country/Province/State.** Western Asia. Turkey.


**TYPE** from Turkey, Erdschias-Dagh: *Penther & Zederbauer* (WU syn).


**Derivation** (Clifford & Bostock 2007): L. intermediate. Having affinities with but distinct from other species.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, slender, 10–60 cm long, 3–4 -noded. Leaf-sheaths smooth. Ligule an eciliate membrane, 2–6 mm long, lacerate. Leaf-blades convolute, 2–12 cm long, 1–4 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or lanceolate, 3–20 cm long, 0.75–1.5 cm wide. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.2–2.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume lanceolate, 2.3–2.7 mm long, 0.9–1 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1-awned, aawn terminal, aawn 0.3–0.5 mm long. Upper glume lanceolate, 2.6–2.8 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3-veined. Upper glume apex acuminate, awned, 1-awned, aawn terminal, aawn 0.3–0.5 mm long.

**Florets.** Fertile lemma lanceolate, 2.2–2.5 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma apex acute, awned, 1-awned. Principal lemma awn subapical, flexuous, 9–10 mm long overall. Palea 0.9–1 length of lemma, 2-veined.

**Flower and Fruit.** Anthers 3, 1.2–1.5 mm long. Caryopsis with adherent pericarp. Endosperm liquid.

**Distribution (TDWG).** Continent. Europe, Temperate Asia. **Region.** Northern Europe (*). Southeastern Europe.
**Country /Province /State.** GB Aliens (Ryves et al.). Turkey Europe. Caucasus, Western Asia. Transcaucasus. Iran, Iraq.

**Apera interrupta** (L.) Beauv. *Agrostis* 31. (1812).


**Derivation** (Clifford & Bostock 2007): L. not continuous. Spikelets or inflorescence branches clustered at intervals along an axis.

**Classification.** Subfamily Pooideae. Tribe: Poeeae.

**Habit, Vegetative Morphology.** Annual, culms solitary or caespitose. Culms erect or geniculately ascending, 10–70 cm long, 2–4 -noded. Leaf-sheaths smooth. Ligule an eciliate membrane, 2–5 mm long. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, ovate, interrupted, 3–20 cm long, 0.4–1.5 cm wide. Primary panicle branches appressed or ascending, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume lanceolate, 1–2 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 2–2.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 2–2.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma apex acute, awned, 1 -awned. Principal lemma awn subapical, straight, 4–10 mm long overall. Palea 0.75 length of lemma, 2 -veined.

**Flower and Fruit.** Anthers 3, 0.3–0.4 mm long. Caryopsis with adherent pericarp, ellipsoid. Endosperm liquid.

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, North America, South America. Region. Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


Mendoza. Chubut, Neuquén, Río Negro. La Araucania.
**Apera spica-venti** (L.) Beauv. *Agrost.* 32 (1812).


**Derivation** (Clifford & Bostock 2007): L. *spica*, thorn; *venti*, of the wind. Panicle branches long and thin enabling spikelets to wave in the breeze.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending or decumbent, 20–100 cm long, 3–5 -noded. Ligule an eciliate membrane, 3–12 mm long. Leaf-blades 7–25 cm long, 3–10 mm wide. Leaf-blade surface scabrous, rough adaxially or on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, effuse, 10–25 cm long, 3–15 cm wide. Primary panicle branches spreading, whorled at most nodes, profusely divided, 3–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–3 mm long, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume lanceolate, 2.2–2.5 mm long, 0.75–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute.

**Florets.** Fertile lemma lanceolate, 2.1–2.8 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma apex acute, awned, 1 -awned. Principal lemma awn subapical, flexuous, 5–10 mm long overall. Palea 0.9–1 length of lemma, 2 -veined.

**Flower and Fruit.** Anthers 3, 1–2 mm long. Caryopsis with adherent pericarp, ellipsoid. Endosperm liquid.

2n = 14 (6 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, North America, South America.

**Region.** Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.

**Country /Province /State.** : Denmark, Finland, Great Britain, Norway, Sweden. : Austria, Belgium, Czechoslovakia, Germany, Hungary, Netherlands, Poland, Switzerland. : Corsica, France, Sardinia, Spain. : Albania, Bulgaria, Greece, Italy, Romania, Turkey Europe, Yugoslavia, Belarus, Estonia, Latvia, Lithuania, Baltic States, Krym, Central European Russia, East European Russia, North European Russia, South European Russia, Northwest European Russia, Ukraine. **Northern Africa.** Algeria, Morocco. Siberia, Russian Far East, **Middle Asia, Caucasus, Western Asia.** Altay, Buryatiya, Chita, Irkutsk, Krasnoyarsk, Tuva. Primorye. Kazakhstan, Tadzhikistan. **North-central USA, Northeast USA, Southeastern USA.** Missouri. Connecticut, Maine, Massachusetts, Ohio, New Jersey, New York. Delaware, Maryland.

**Western South America.** Colombia.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *tres*, three; *arista*, bristle; -*ata*, possessing. Spikelets with lower glume two-awned and upper glume one-awned.
**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, culms solitary or caespitose. Culms erect, 15–23 cm long, 3-noded. Culm-internodes smooth, distally glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 4–5 mm long, lacerate. Leaf-blades 4.5–8 cm long, 1.5–2.5 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear or lanceolate, dense, 2–10 cm long, 0.8–2.5 cm wide. Primary panicle branches ascending, 1–2.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.8 mm long, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.6–2.9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume lanceolate, 1.9–2.1 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1 -awned, awn terminal, awn 2.2–2.9 mm long. Upper glume lanceolate, 2.4–2.6 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acuminate, awned, 1 -awned, awn terminal, awn 1.5–1.7 mm long.

**Florets.** Fertile lemma lanceolate, 2–2.4 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface granulose, rough above. Lemma apex acute, awned, 1 -awned. Principal lemma awn subapical, straight or curved, 6.5–10 mm long overall. Palea 2 mm long, 2 -veined.

**Flower and Fruit.** Anthers 3, 1.5–1.7 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Western Asia. Turkey.

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**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L. -ana, indicating connection. From Peru.

**Classification.** Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations extravaginal. Culms geniculately ascending, 14–24 cm long. Culm-internodes 0.3–1.3 cm long. Leaf-sheaths longer than adjacent culm internode, keeled. Ligule an eciliate membrane, 2–3 mm long, erose or lacerate. Leaf-blades flat or involute, 3–7 cm long, 0.2–1.2 mm wide, 1.6 cm long at summit of culm. Leaf-blade apex hooded.

**Inflorescence.** Inflorescence a panicle, comprising 5–10 fertile spikelets. Panicle open, linear, 1.7–2.5 cm long. Primary panicle branches appressed, simple, bearing 2 fertile spikelets on each lower branch. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or cuneate, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes 1.2–2 mm long.

**Glumes.** Glumes two, persistent, similar, shorter than spikelet. Lower glume linear, 1–2 mm long, 1 length of upper glume, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1–2 mm long, 0.25–0.33 length of adjacent fertile lemma, 3(–4) -veined. Upper glume apex entire or dentate, 2 -fid, acute.

**Florets.** Fertile lemma lanceolate, 2.2–3.5 mm long, herbaceous, keeled, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma apex dentate, 3 -fid, with lobes 0.1–0.3 mm long. Palea 2–3.2 mm long. Palea keels scabrous. Palea apex dentate, 2 -fid.

**Flower and Fruit.** Lodicules 2, lanceolate, 0.7–0.8 mm long. Anthers 3, 2–2.9 mm long, yellow. Ovary glabrous.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Peru.


**Illustrations (Books):** S.A. Renvoize, *Gramineas de Bolivia* (1998) (124, Fig. 30), E.G. Nicora, *Los Generos de Gramineas de America Austral* (1987) (278, Fig. 89).

**Derivation** (Clifford & Bostock 2007): L. procumbo, fall down. Culms creeping.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, mat forming. Culms prostrate, 30–50 cm long (long), rooting from lower nodes. Ligule an eciliate membrane, 2 mm long. Leaf-blades 3–10 cm long, 2–3 mm wide, flaccid.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, effuse, 6–22 cm long. Primary panicle branches whorled at most nodes, simple, bearing 2–3 fertile spikelets on each lower branch. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 7–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes 1.5–2 mm long, eventually visible between lemma.

**Glumes.** Glumes both absent or obscure (rarely to 1 mm long).

**Florets.** Fertile lemma lanceolate, 4–9 mm long, herbaceous, keeled, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex setaceously acuminate. Palea keels eciliate.

**Flower and Fruit.** Anthers 3, 4 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum elliptic.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State.** Western South America. Bolivia, Colombia, Ecuador.

**Apluda mutica** L. Sp. Pl. 82. (1753).


**Derivation** (Clifford & Bostock 2007): L. blunt. Lacking awns or lemmas and/or glumes truncate.

**Classification.** Subfamily Panoicoideae. Tribe: Saccharaeae. Subtribe Ischaeminae.
**Habit, Vegetative Morphology.** Perennial. Culms scandent or decumbent or prostrate, 30–300 cm long, rooting from lower nodes. Ligule a ciliolate membrane. Leaf-blade base tapering to the midrib. Leaf-blades 5–25 cm long, 2–10 mm wide. Leaf-blade apex attenuate, filiform.

**Inflorescence.** Synflorescence compound, paniculate, 3–40 cm long, lax.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, enclosed. Spathoehle ovate, 3.5–10 cm long, membranous. Racemes 1, single, bearing a triad of spikelets. Rachis obsolete. Spikelets in threes. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 2 in the cluster. Pedicels present, oblong, flattened, subequal, 2–4 mm long, ciliate.

**Sterile Spikelets.** Companion sterile spikelets rudimentary or well-developed (pair unequal), male, lanceolate, dorsally compressed, 2–5 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes herbaceous, acute, muticous. Companion sterile spikelet lemmas 2, enclosed by glumes, muticous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 2–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus oblong (bulbous), 0.5–2.5 mm long, base obtuse.


**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 0.9 length of spikelet, hyaline, 3 -veined, acute. Fertile lemma oblong, 4 mm long, hyaline, without keel, 3 -veined, 0–3 - veined. Lemma apex entire or lobed, 2 -fid, incised 0.6 of lemma length, muticous or awned, 1 -awned. Principal lemma awn from a sinus, straight or geniculate, 4–12 mm long overall, without a column or with twisted column. Palea hyaline, 0 -veined, without keels.

**Flower and Fruit.** n = 10 (5 refs TROPICOS), or 30 (2 ref TROPICOS). 2n = 20 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia, Tropical Asia, Australasia, Pacific, North America (*), South America.


**Illustrations (Journals):** *Hooker's Icones Plantarum* (3319 (1936)).

**Derivation (Clifford & Bostock 2007):** in honor of Burtt who collected in Tanzania.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms geniculately ascending or decumbent, 20–90 cm long, rooting from lower nodes. Leaves mostly basal. Ligule an eciliate membrane, 0.5 mm long, erose, truncate. Leaf-blades 4–30 cm long, 1.5–4 mm wide. Leaf-blade apex attenuate.
Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 3–20 cm long, contracted about primary branches. Primary panicle branches bearing spikelets almost to the base. Spikelets ascending, solitary. Fertile spikelets pedicelled. Pedicels present, filiform or linear, 1–2 mm long.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

Glumes. Glumes persistent, similar, subequal in width, shorter than spikelet. Lower glume lanceolate, 4.5–5 mm long. 0.8–0.9 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate, mucronate or awned, 1 -awned, awn 0.2–2.5 mm long. Upper glume lanceolate, 5–6.5 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acuminately mucronate or awned, 1 -awned, awn 0.2–2.5 mm long.

Florets. Fertile lemma ovate, 4–5.5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma surface pubescent, hairy below. Lemma apex acute, awned, 1 -awned. Principal lemma awn 2–3 mm long overall. Palea 0.5–0.7 length of lemma, 2 -veined. Palea keels ciliate, adorned below, with 0.5–0.7 of their length adorned. Palea apex dentate, 2 -fid, acuminate, awned, awns 2–3.5 mm long. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with free soft pericarp, ellipsoid, isodiametric, trigonous. Embryo 0.3–0.4 length of caryopsis. Endosperm farinose. Disseminule comprising a floret.

Country /Province /State. East Tropical Africa. Tanzania.


Accepted by: R.J.Soreng et al., Catalogue of New World Grasses (2000–2003) and online, W.D.Clayton & K.Harman, GrassBase (2008) and online (as Panicum).


Illustrations (Books): S.A.Renvoize, The Grasses of Bahia, 1984 (144, Fig.60 as Panicum).

Derivation (Clifford & Bostock 2007): from the Sierra de las Animas, Uruguay.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 80–110 cm long. Leaves without demarcation between sheath and blade. Leaf-sheaths glabrous on surface or pubescent, outer margin hairy. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, 14–40 cm long, 7–11 mm wide, stiff. Leaf-blade apex pungent.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, 2–2.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, purple, without keels, 3–5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, purple, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2–2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil Northeast.
Bahia. Bahia.


**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (144, Fig. 60 as Panicum).

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Bahia Province, Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.

**Habit, Vegetative Morphology.** Perennial. Culms 100 cm long. Leaves without demarcation between sheath and blade. Leaf-sheaths hirsute. Ligule an e ciliate membrane, 0.5 mm long. Leaf-blades lanceolate, 18–40 cm long, 8–12 mm wide, stiff. Leaf-blade surface pubescent. Leaf-blade apex pungent.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 1.5 mm long, falling entire.

**Glumes.** Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, pallid, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, pallid, without keels, 5 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, purple, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.


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**Derivation** (Clifford & Bostock 2007): Gk. chnoos, fine down on a peach; -odes, resembling. Leaf-blades densely hairy.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 50–105 cm long. Leaves without demarcation between sheath and blade. Ligule absent. Leaf-blades 20–40 cm long, 5–10 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade apex pungent.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 2–2.5 mm long, falling entire.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

**Flower and Fruit.** Anthers 3, 1.25 mm long.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Northern South America, Brazil. Guyana, Venezuela. Brazil Southeast, Brazil North. Minas Gerais.


Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Serra do Cipos, Minais Gerais, Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes short. Culms erect, 32–60 cm long. Leaves without demarcation between sheath and blade. Leaf-sheaths glabrous on surface or pilose, outer margin hairy. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades flat or involute, 13–20 cm long, 2–3 mm wide, stiff. Leaf-blade surface pilose, densely hairy. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, dense, 6–11 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, flexuous, 3–12 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, 2–3 mm long, falling entire.

**Glumes.** Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface pilose. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface pilose. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, pilose, acute. Palea of lower sterile floret pilose. Fertile lemma elliptic, dorsally compressed, 2–3 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate. Palea surface pilose.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Brazil. Brazil Southeast. Minas Gerais, Rio de Janeiro, Espirito Santo. Minas Gerais.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*).

**Illustrations**: None found.

**Derivation** (Clifford & Bostock 2007): *e-*, without; *ligula*, small tongue; *-ata*, possessing. Ligule lacking or very much reduced.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Rootstock evident. Butt sheaths persistent and investing base of culm, with curly dead sheaths. Culms 50–75 cm long, with prop roots. Leaves mostly basal. Leaf-sheaths hirsute. Ligule absent. Leaf-blades flat or involute, 20–30 cm long, 7–13 mm wide, stiff. Leaf-blade surface scabrous, glabrous or hirsute. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence a panicle. Peduncle 10–15 cm long, glabrous. Panicle open, ovate or pyramidal, 10–15 cm long. Primary panicle branches ascending, not whorled or whorled at lower nodes. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.7–3.3 mm long, falling entire.

**Glumes.** Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1–1.5 mm long, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse or acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 1.5–2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acuminate. Palea involute, indurate.

**Distribution (TDWG).** Continent: South America.


**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (144, Fig. 60 as Panicum).

**Derivation** (Clifford & Bostock 2007): Gk. *eu-*, well; *prepo*, catch the eye; In contrast to *Andropogon* lacks pedicellate sterile spikelets.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms 60–65 cm long. Leaves without demarcation between sheath and blade. Leaf-sheaths glabrous on surface or hirsute, outer margin hairy. Ligule a ciliate membrane. Leaf-blades involute, 12–40 cm long, 3–7 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex pungent.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, 2 mm long, falling entire.

**Glumes.** Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.
Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5-veined, acute. Fertile lemma elliptic, dorsally compressed, 2 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast, Brazil Southeast.


Accepted by: R.J. Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Panicum*).


Illustrations (Books): J.A. Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (202, Fig. 155 as *Panicum jauanum*).


Habit, Vegetative Morphology. Perennial. Culms 100–150 cm long. Leaf-sheaths pi lose. Ligule a ciliate membrane, 0.3–2.3 mm long. Leaf-blades 20–40 cm long, 12–16 mm wide.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3.1–3.3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2.1–2.3 mm long, 0.66 length of spikelet, membranous, without keels, 3-veined. Lower glume primary vein scabrous. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5-veined. Upper glume primary vein scabrous.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5-veined. Fertile lemma elliptic, dorsally compressed, 2.6–2.7 mm long, indurate, yellow, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.7 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Accepted by: R.J. Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Panicum*).


Illustrations (Journals): *Systematic Botany* (33: 292, fig.4 (2008)).


60 cm long, 5–12 mm wide, glaucous. Leaf-blade surface scabrous, glabrous, hairless except near base. Leaf-blade margins glabrous or ciliate.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate or pyramidal, 16–22 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 1.5–2 mm long, falling entire.

**Glumes.** Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3–5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.5–2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast.

Minas Gerais, Rio de Janeiro, Espirito Santo. Minas Gerais.


**Illustrations (Journals):** *Systematic Botany* (33: 293, fig.5(2008)).

**Derivation (Clifford & Bostock 2007):** in honor of Adolpho Lutz (fl. 1914) who collected in Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.


**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 8–10 cm long, 1 cm wide. Primary panicle branches appressed, 2–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.8–2 mm long, falling entire.

**Glumes.** Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3–5 -veined, obtuse. Fertile lemma elliptic, dorsally compressed, 1.6 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast.


**TYPE** from Brazil. **Basionym or Replaced Name:** Panicum molinioides Trin., *Gram. Panic.* 238 (1826). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: T: 954, Nov 24, Brazil:

Illustrations (Journals): Systematic Botany (33: 293, fig.6 (2008)).


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, 1.5–1.75 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, claspig, 0.5–0.66 length of spikelet, membranous, pallid or yellow, without keels, 1–3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, purple, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, purple, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Accepted by: R.J.Soreng et al., Catalogue of New World Grasses (2000–2003) and online, W.D.Clayton & K.Harman, GrassBase (2008) and online (as Panicum).


Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk polios, gray; phyllon, leaf. Leaf-blades glaucous or grey-green.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 90–135 cm long. Leaf-sheaths keeled, pilose, outer margin hairy. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, 35–72 cm long, 6–12 mm wide, stiff, glaucous or grey-green. Leaf-blade surface glabrous or pilose. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or pyramidal, 20–26 cm long, 7–18 cm wide. Primary panicle branches ascending or spreading, whorled at most nodes, profusely divided. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, 2–2.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

**Accepted by**: R.J. Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Panicum*).


**Illustrations**: None found.


**Classification**: Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Basal innovations flabellate. Culms erect, 60–80 cm long. Leaves without demarcation between sheath and blade. Leaf-sheaths without keel, hirsute. Ligule a ciliate membrane, 0.2–0.6 mm long. Leaf-blades flat or involute, 10–30 cm long, 2–6 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex pungent.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.7–2.8 mm long, falling entire.

**Glumes.** Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Palea of lower sterile floret pubescent, adorned on keels. Fertile lemma elliptic, dorsally compressed, 2.2–2.4 mm long, indurate, yellow, without keel. Lemma margins involute. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.


**Accepted by**: R.J. Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Panicum*).


**Illustrations (Books)**: J.A. Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (205, Fig. 159).

**Illustrations (Journals)**: *Systematic Botany* (33: 294, fig.7 (2008)).


**Classification**: Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.
Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms geniculately ascending, 40–85 cm long, wiry. Leaves mostly basal. Leaf-sheaths loose, glabrous on surface. Leaf-sheath auricles erect. Ligule a fringe of hairs or absent, 0–1 mm long. Leaf-blades erect, flat or involute, 20–25 cm long, 5–6 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex attenuate, pungent.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute or acuminate, 3.5–4 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, dorsally compressed, 3 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *subtilis*, delicate; *ramus*, branch; *-ula*, diminutive; *-osum*, abundance. Inflorescence branches are delicate and thread-like.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 6–70 cm long. Ligule a ciliate membrane. Leaf-blades aciculate, terete, 40–50 cm long, 1–1.5 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex pungent.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, 4 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute, mucronate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, ciliate on margins, acute. Fertile lemma elliptic, dorsally compressed, 4 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

**Accepted by:** R.J. Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Panicum*).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. from Pico de Tijuca, near Rio de Janeiro, Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.


**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, 6–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 3 mm long, falling entire.

**Glumes.** Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–1 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2.5 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.


**Illustrations (Books):** L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (123, Fig. 26).

**Illustrations (Journals):** *Smithsonian Contributions to Botany* (9: 14, Fig. 4 (1973)).

**Derivation** (Clifford & Bostock 2007): L. variable. Stamen number variable.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Synflorescence simple.

Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, exerted. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 10–15 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 40–50 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes curved, 4 mm long, scaberulous.

**Glumes.** Glumes both absent or obscure.

**Florets.** Fertile florets decreasing in size upwards. Fertile lemma lanceolate, 5–15 mm long, chartaceous, yellow, keeled, more than 3-veined. Lemma surface scaberulous. Lemma apex attenuate.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil South.


**Illustrations (Books):** L. B. Smith, D.C. Wasshausen, R.M. Klein *Flora Ilustrada Catarinensis Gramineas* (1981–1982) (123, Fig. 26).

**Illustrations (Journals):** *Smithsonian Contributions to Botany* (9: 16, Fig. 5 (1973)), *Systematic Botany* (20: 214, Fig. 4 (1995)).


**Derivation** (Clifford & Bostock 2007): L. simplex. Culms or inflorescences unbranched.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Synflorescence simple. Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, subtended by an unspecialized leaf-sheath, embraced at base by subtending leaf. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 8–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 20–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent.

**Glumes.** Glumes both absent or obscure.

**Florets.** Fertile lemma ovate, 18–22 mm long, cartaceous, keeled, 9–11 -veined, more than 3-veined. Lemma surface puberulous, hairy on veins. Lemma apex acuminate. Palea lanceolate, 0.8 length of lemma. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil South.


TYPE from Burma. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Mindat, 5,000 ft, a small grass coming up in the burnt and blackened pine forest along the Mindat ridge, 26 Apr 1956, F. Kingdon-Ward 22155 (HT: K).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. anomalos, irregular. Diverging from the normal, often with respect to number of lemmas in the spikelet or otherwise unusual for the genus in some respect.


Habit, Vegetative Morphology. Perennial. Butt sheaths glabrous. Culms 10–20 cm long, 2 -noded. Culm-nodes constricted, glabrous. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long. Leaf-blades linear or lanceolate, flat or involute or revolute, 4–8 cm long, 2–3 mm wide. Leaf-blade surface scaberulous, rough adaxially, pilose, sparsely hairy, hairy abaxially, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, 1.5–2.5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs white. Rhachis internodes linear, 2.5–3 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 3–4 mm long, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, male, elliptic, dorsally compressed, 3 mm long, longer than fertile. Companion sterile spikelet glumes chartaceous, 3–5 -veined, pilose, truncate, muticous. Companion sterile spikelet lemmas 2, enclosed by glumes, 1-awned (geniculately), with 5 mm long awn.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, truncate, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 4.5 mm long, 0.9 length of spikelet, chartaceous, much thinner above, without keels, 5 -veined. Lower glume lateral veins distinct. Lower glume surface pilose, hairy below. Lower glume hairs white. Lower glume apex erose, truncate. Upper glume oblong, 1 length of spikelet, chartaceous, with hyaline margins, 3 -veined. Upper glume surface pilose. Upper glume apex truncate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 4.5 mm long, 0.9 length of spikelet, hyaline, 0 -veined, without midvein, without lateral veins, pilose, hairy at apex, truncate. Fertile lemma oblong, 4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8 mm long overall, with twisted column. Column of lemma awn hispidulous. Palea hyaline, 2 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 2, 1–2 mm long.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 837).

Derivation (Clifford & Bostock 2007): L. brevis, short; gluma, husk. One or both glumes short with respect to the length of the spikelet.


Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms 25–50 cm long, wiry, 7–9 -noded. Leaf-sheaths pilose. Ligule an eciliate membrane, 1 mm long. Leaf-blades linear or lanceolate, 3–13 cm long, 2.5–6 mm wide. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, 2.5–4.5 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs tawny. Rhachis internodes linear, 2 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear.
**Sterile Spikelets.** Basal sterile spikelets well-developed, 1 in number. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or cuneate, dorsally compressed, 3.5–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, attached transversely. Spikelet callus hairs tawny.

**Glumes.** Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume obovate or cuneate, 0.9 length of spikelet, chartaceous, much thinner above (and red-brown), yellow, without keels. Lower glume primary vein falling short of apex. Lower glume lateral veins transversely connected at apex, all falling short of apex. Lower glume surface pilose, hairy at apex. Lower glume apex erose, truncate. Upper glume oblong, 1 length of spikelet, chartaceous.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, hyaline, pilose, hairy at apex, erose. Fertile lemma lanceolate or oblong, chartaceous, without keel. Lemma apex entire, awned, 1 -awned. Principal lemma awn geniculate, 22–28 mm long overall, with twisted column.

**Distribution (TDWG).** Continent. Temperate Asia.


**TYPE** from Burma. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Burma: Rangoon Lake, December 1876, ..., S. Kurz 2749 (HT:K) see notes.

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Germainiinae.

**Habit, Vegetative Morphology.** Annual. Culms rambling, 10–20 cm long. Culm-nodes glabrous. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 0.75 mm long, lacerate. Leaf-blades 2–3.5 cm long, 2–4 mm wide, flaccid. Leaf-blade midrib keeled beneath. Leaf-blade surface scaberulous, pubescent, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scaberulous, tuberculate-ciliate. Leaf-blade apex acute or acuminate.

**Inflorescence.** Inflorescence composed of racemes. Peduncle glabrous. Racemes 2, paired, 2–3 cm long. Rhachis fragile at the nodes, subtetere, puberulous on surface, ciliate on margins. Rhachis hairs tawny. Rhachis internodes linear, 1.25 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 1.25 mm long, ciliate, with tawny hairs, with 2.5 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, truncate, 3.5–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, attached transversely.

**Glumes.** Glumes dissimilar, reaching apex of florets, firmer than fertile lemma, shiny. Lower glume oblong, 0.9 length of spikelet, coriaceous, much thinner above, much thinner on margins, dark brown, without keels, 7 -veined. Lower glume primary vein extending to apex. Lower glume lateral veins obscure, with some extending to apex. Lower glume surface glabrous or pilose, hairy below. Lower glume apex erose, truncate. Upper glume oblong, 1 length of spikelet, chartaceous, yellow or light brown, 3 -veined. Upper glume lateral veins all falling short of apex. Upper glume apex erose, truncate.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic or oblong, 3 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma lanceolate, 4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire or dentate, 2 -fid, awned, 1 -awned. Principal lemma awn apical or from a sinus, geniculate, 18 mm long overall, with twisted column. Column of lemma awn 9 mm long, hispidulous. Palea 2 mm long, hyaline, 0 -veined, without keels.
Flower and Fruit. Lodicules absent. Anthers 2, 2–2.5 mm long.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Cochinchina, now included in Laos and Cambodia.


Habit, Vegetative Morphology. Annual. Culms erect, slender, 20–40 cm long. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 0.5–1 mm long, lacerate. Leaf-blades 2–4 cm long, 2–4 mm wide. Leaf-blade midrib keeled beneath. Leaf-blade surface glabrous or pilose, hairy abaxially, with tubercle-based hairs. Leaf-blades margins ciliate, hairy at base. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 2, paired, 1–2 cm long. Ra. chis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs yellow, 1.75 mm long. Rhachis internodes linear, 1.75 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 1.75 mm long, ciliate, with 2–2.5 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without ra.hchilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, truncate, 4.5–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet calus base obtuse, attached transversely.

Glumes. Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume lanceolate or elliptic, 0.66 length of spikelet, coriaceous, much thinner above, much thinner on margins, yellow, without keels, 7 -veined. Lower glume primary vein extending to apex or falling short of apex. Lower glume lateral veins all falling short of apex. Lower glume apex erose, emarginate. Upper glume oblong, 1 length of spikelet, chartaceous, yellow, 3 -veined. Upper glume lateral veins all falling short of apex. Upper glume apex truncate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate or oblong, 3.5 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma oblong, 4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 20 mm long overall, with twisted column. Column of lemma awn 10 mm long, hirsipidulous. Palea 4 mm long, hyaline, 0-veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 2, 2–2.5 mm long.


Apocopis collinis Balansa. Morot, Journ. de Bot. 4: 84. (1890).


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. collis, a hill; -ina, belonging to. Mountain species.


Habit, Vegetative Morphology. Perennial. Culms 20–40 cm long, 3–4 -noded. Culm-nodes brown or purple. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1 mm long. Leaf-blades 3–5 cm long, 2–3.5 mm wide. Leaf-blade surface smooth, pubescent, hairy
abaxially, with tubercle-based hairs. Leaf-blade margins cartilaginous, smooth or scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Peduncle glabrous. Racemes 1–2, single or paired, 2–4.5 cm long. Rachis fragile at the nodes, subterete, ciliate on margins. Rachis hairs tawny, 3 mm long. Rachis internodes linear, 2 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 0.5–1.5 mm long, ciliate, with tawny hairs, with 4 mm long hairs.

**Sterile Spikelets.** Basal sterile spikelets well-developed, 1 in number. Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 5.5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.

**Glumes.** Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume oblong, 5.5–6 mm long, 1 length of spikelet, coriaceous, much thinner above, much thinner on margins, light brown, without keels, 7 -veined. Lower glume primary vein falling short of apex. Lower glume lateral veins all falling short of apex. Lower glume surface asperulous (granular). Lower glume margins ciliate. Lower glume apex truncate or obtuse. Upper glume lanceolate, 1 length of spikelet, chartaceous, 3 -veined. Upper glume apex truncate.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate or ovate, 5 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma oblong, 4.5 mm long, hyaline, without keel, 0–1 -veined, 0–3 -veined, without veins or one-veined. Lemma apex erose, muticous or mucronate. Palea hyaline, 0 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 2–3 mm long.


**Apocopis courtallumensis** (Steud.) Henrard. *Blumea*, 4: 524, (1941).


**Basionym or Replaced Name:** *Andropogon courtallumensis* Steud., *Syn. Pl. Gram.* 377 (1854).


**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Courtallum, Madras State, India.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Germainiinae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 25–50 cm long. Leaf-sheaths striately veined, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades linear or lanceolate, 1–10 cm long, 3–6 mm wide. Leaf-blade midrib keeled beneath. Leaf-blade surface scabrous, pilose, densely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acute or acuminate.

**Inflorescence.** Inflorescence composed of racemes. Peduncle glabrous. Racemes 2, paired, 2–4 cm long. Rachis fragile at the nodes, subterete, ciliate on margins. Rachis hairs tawny, 1–2 mm long. Rachis internodes linear, 2 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 2.5 mm long, ciliate, with tawny hairs, with 2 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.

**Glumes.** Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume obovate, 4.5–5 mm long, 0.9–1 length of spikelet, coriaceous, dark brown, without keels, 7 -veined. Lower glume primary vein falling short of apex. Lower glume lateral veins all falling short of apex or with some
extending to apex. Lower glume apex emarginate. Upper glume oblong, 1 length of spikelet, chartaceous, light brown, 3 -veined. Upper glume surface pubescent. Upper glume apex truncate.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, 4.75 mm long, hyaline, 0 -veined, without midvein, without lateral veins, erose. Fertile lemma lanceolate or oblong, 4.5 mm long, chartaceous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 18–20 mm long overall, with twisted column. Column of lemma awn 8 mm long, pubescent. Palea tightly convolute around flower, hyaline, 0 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 2.5–3.5 mm long. 

*n* = 20 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent, Indo-China. India. Laos, Thailand. Tamilnadu.


**TYPE** from Burma. **T:<Type of Basionym>:** TROPICOS and Kew Synonomy Database: Burma: Taunggyi, fairly common on hillsides, 19 Jun 1948, U Thein Lwin 531 (HT: K).

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Germainiinae.

**Habit, Vegetative Morphology.** Perennial. Butt sheaths thickened and forming a bulb, yellow, woolly. Culms 20–40 cm long. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 5 mm long, lacerate. Leaf-blades 7–14 cm long, 3–6 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Peduncle glabrous. Racemes 3–4, digitate, erect or ascending, 3–6 cm long. Central inflorescence axis 1 cm long, pilose. Rhachis fragile at the nodes, subterete, pilose on surface, ciliate on margins. Rhachis hairs yellow. Rhachis internodes clavate, 2.5 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 4 mm long, ciliate, with 3 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, truncate, 8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.

**Glumes.** Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume oblong, 6.5 mm long, 0.8 length of spikelet, coriaceous, without keels, 9–13 -veined. Lower glume primary vein falling short of apex. Lower glume lateral veins all falling short of apex. Lower glume surface pilose. Lower glume margins ciliate. Lower glume hairs white or yellow. Lower glume apex dentate, 3–5 -fid, truncate. Upper glume oblong, 0.8 length of spikelet, chartaceous, 3 -veined. Upper glume lateral veins all falling short of apex. Upper glume surface scabrous, rough above, pilose, hairy below. Upper glume margins ciliate. Upper glume hairs yellow. Upper glume apex truncate.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, 6 mm long, hyaline, 0 -veined, without midvein, without lateral veins, obtuse. Palea of lower sterile floret 0.1 length of lemma. Fertile lemma linear, 8 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma surface scabrous, pilose. Lemma apex lobed, 2 -fid, with lobes 2 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 15 mm long overall, with twisted column. Column of lemma awn 8 mm long, hispidulous. Palea hyaline, 0 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 3.5 mm long. Stigmas 2 or 3 (rarely).

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indo-China. Myanmar.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 837).

**Derivation** (Clifford & Bostock 2007): L. intermediate. Having affinities with but distinct from other species.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Germainiinae.

**Distribution (TDWG).** Continent: Temperate Asia, Tropical Asia.

**Country /Province /State.** China. China South Central, China Southeast. **Indo-China.** Cambodia, Thailand, Vietnam. Guangdong, Zhejiang, Yunnan.


**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Mangalore, Madras State, India.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Germainiinae.

**Habit, Vegetative Morphology.** Annual. Culms decumbent, 6–30 cm long. Ligule an eciliate membrane. Leaf-blades 1–5 cm long, 2–3 mm wide.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2, paired, erect, 1–2.5 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs dark brown. Rhachis internodes linear. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 2 mm long, ciliate (brown hairs).

**Sterile Spikelets.** Basal sterile spikelets well-developed, 2–3 in number, barren, larger than fertile. Basal sterile spikelet lemmas awnless. Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, truncate, 3–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, attached transversely. Spikelet callus hairs dark brown.

**Glumes.** Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume cuneate, 1 length of spikelet, chartaceous to coriaceous, much thinner above, dark brown, without keels, 7 -veined. Lower glume primary vein falling short of apex. Lower glume lateral veins all falling short of apex. Lower glume surface glabrous or pilose. Lower glume apex emarginate or truncate. Upper glume chartaceous.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 1 length of spikelet, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma linear, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–20 mm long overall, with twisted column. Column of lemma awn hispidulous. Palea hyaline, 0 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2. $n = 10$ (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Tropical Asia.


**Basionym or Replaced Name:** Ischaemum paleaceum Trin., Mem. Acad. Petersb. Ser. 6, 2: 293 (1833).

**Illustrations (Books):** H.J.Noltie, The Grasses of Bhutan (2000) (783, Fig. 54), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 809).


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Germainiinae.

**Habit, Vegetative Morphology.** Perennial. Butt sheaths papery or scarious. Culms 40–80 cm long. Culm-nodes glabrous. Ligule an eciliate membrane, erose. Leaf-blades linear or lanceolate, 6–12 cm long, 5–10 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scaberulous. Leaf-blade apex acute or acuminate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–4, paired or digitate, 1.5–4 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs dark brown. Rhachis internodes linear, 2 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, ciliate, with 2–3 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or obovate, dorsally compressed, truncate, 4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong or obovate, 3.5–4.5 mm long, 0.8–1 length of spikelet, coriaceous, much thinner above, dark brown, without keels, 7 -veined. Lower glume primary vein extending to apex. Lower glume lateral veins transversely connected at apex, with some extending to apex (the outer pair). Lower glume surface asperulous. Lower glume apex truncate, mucronate (lateral veins excurrent). Upper glume oblong, 1 length of spikelet, chartaceous, dark brown, 3 -veined. Upper glume surface scabrous, rough above. Upper glume apex erose, truncate.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 0.9 length of spikelet, hyaline, 1 -veined, without lateral veins, obtuse. Fertile lemma oblong, 3.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, muticus or awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 4–10 mm long overall, with twisted column. Column of lemma awn hispidulous. Palea hyaline, 0 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Germainiinae.
Habit, Vegetative Morphology. Perennial. Culms 50–90 cm long. Lateral branches ample. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1.5 mm long, pubescent on abaxial surface, lacerate. Leaf-blades 10–20 cm long, 4–8 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface scabrous, pubescent, densely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminata.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 2, paired, 4–7 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs tawny, 4–5 mm long. Rhachis internodes cuneate, 1.5 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 2 mm long, ciliate, with tawny hairs, with 4–5 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 7.25 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.

Glumes. Glumes dissimilar, reaching apex of florets, firmers than fertile lemma. Lower glume oblong, 6–7 mm long, 0.9 length of spikelet, coriaceous, dark brown, without keels, 7 -veined. Lower glume primary vein falling short of apex. Lower glume lateral veins all falling short of apex. Lower glume margins ciliate. Lower glume hairs 2–4 mm long. Lower glume apex truncate. Upper glume oblong, 1 length of spikelet, chartaceous, with hyaline margins, 3 -veined. Upper glume primary vein scabrous. Upper glume apex truncate.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret oblong, 5.5 mm long, hyaline, 1 -veined, without lateral veins, ciliate on margins, truncate. Fertile florets bisexual or female. Fertile lemma linear, 7 mm long, membranous, much thinner on margins, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma margins ciliate. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 30 mm long overall, with twisted column. Column of lemma awn hispidulous. Palea hyaline, 0 -veined, without keels.

Flower and Fruit. Lodicles absent. Anthers 2, 3 mm long.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. most beautiful. To be the most beautiful member of a genus.


Habit, Vegetative Morphology. Annual. Culms 10–20 cm long. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, 0.5–0.75 mm long. Leaf-blades 3–6 cm long, 3–5 mm wide, flaccid. Leaf-blade surface pubescent, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes, subtended by an inflated leaf-sheath. Peduncle 3–5.5 cm long, glabrous. Racemes 2, paired, erect or ascending, 1.5–3 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs tawny. Rhachis internodes linear, 2 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 2 mm long, ciliate, with tawny hairs, with 3–3.5 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels or rudimentary.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 5.75 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.

Glumes. Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume oblong, 5–5.5 mm long, 0.9 length of spikelet, membranous, much thinner above, much thinner on margins,

**Florets.** Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret oblong, 5 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma oblong. 5.5 mm long, chartaceous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 40 mm long overall, with twisted column. Column of lemma awn 18 mm long, pubescent. Palea hyaline, 0 -veined, without keels.

**Flower and Fruit.** Lodicules absent. Anthers 2, 2.5 mm long.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indo-China. Cambodia.


**TYPE** from Cambodia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Cambodge: Plaine du Tonle Sap; route de Phnom Penh a Pursat, alt. 50 m., terrains sablonneux humides,...

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Germainiinae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 2, paired, erect, 3 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis internodes linear. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, ciliate.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, truncate, 4.5–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume obovate, 3.5–4 mm long, 0.7–0.8 length of spikelet, coriaceous, without keels, 7 -veined. Lower glume surface flat. Lower glume apex erose, truncate. Upper glume oblong, 5 mm long, 1 length of spikelet, chartaceous, light brown. Upper glume apex acuminated.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, hyaline, truncate. Fertile lemma oblong, 2.8–3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12–14 mm long overall, with twisted column.

**Flower and Fruit.** Lodicules absent. Anthers 2.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indo-China. Cambodia.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Siam, now Thailand.


Habit, Vegetative Morphology. Annual. Culms slender, 20–45 cm long. Culm-nodes glabrous or pubescent. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 0.75 mm long. Leaf-blades linear or lanceolate, 2–5 cm long, 2–3 mm wide. Leaf-blade surface hirsute, sparsely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, subtended by an inflated leaf-sheath. Peduncle 10 cm long, pilose above. Racemes 2, paired, 3–4 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs tawny, 2–4.5 mm long. Rhachis internodes linear, 1.5 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 2.5 mm long, ciliate, with tawny hairs, with 4.5 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, truncate, 4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.


Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret oblong, 4 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma oblong, 4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma surface scabrous. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 25–30 mm long overall, with twisted column. Column of lemma awn 14 mm long, hispidulous. Palea 3–3.25 mm long, hyaline, 0 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 2, 2–2.5 mm long.


TYPE from India. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Hazaribagh: Clarke 33849j.

Illustrations (Books): G.G.Potgar, C.B.Salunkhe & S.R.Yadav, Grasses of Maharashtra (2012) (Fig.3).


Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, 5–15 cm long. Leaf-sheaths inflated, pilose, with tubercle-based hairs. Ligule an eciliate membrane, lacerate. Leaf-blades linear or lanceolate, 2–3.5 cm long, 2–3 mm wide, flaccid. Leaf-blade midrib keeled beneath. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scaberulous, tubercul-ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes, subtended by a spatheole, enclosed. Peduncle glabrous. Racemes 2, paired, erect, 1–2 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs tawny, 2.5 mm long. Rhachis internodes linear, 1.5 mm long. Spikelets appressed, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 1.5 mm long, ciliate, with tawny hairs.
Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 3.5–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base obtuse, attached transversely.

Glumes. Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume oblong, 3.5 mm long, 0.9 length of spikelet, chartaceous, much thinner above, without keels, 7 -veined. Lower glume primary vein falling short of apex. Lower glume lateral veins all falling short of apex. Lower glume surface pilose. Lower glume hairs tawny. Lower glume apex truncate. Upper glume oblong, 1 length of spikelet, chartaceous, light brown, 3 -veined. Upper glume surface pilose. Upper glume apex truncate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 3 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma oblong, 3–4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 18–24 mm long overall, with twisted column. Column of lemma awn 8–12 mm long, puberulous. Palea hyaline, 0 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 2, 0.75–1 mm long.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Butt sheaths glabrous, persistent and investing base of culm, with compacted dead sheaths. Culms erect, robust, 50–100 cm long. Culm-nodes glabrous or bearded. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane, 1 mm long. Leaf-blades 10–20 cm long, 2–5 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, 2–4.5 cm long. Rhachis fragile at the nodes, flattened, ciliate on margins. Rhachis hairs dark brown, 3–4 mm long. Rhachis internodes linear, 1.5 mm long. Rhachis internode tip clavate. Spikelets appressed, in pairs. Fertile spikelets sessile or sessile and pedicelled, 1 in the cluster or 2 in the cluster (rarely), heteromorphic (when 2), the upper smaller (3–4 mm long, terete, female). Companion sterile spikelets pedicelled, 1 in the cluster or 0 in the cluster. Pedicels present, adnate at the base to lower glume of sessile spikelet, linear, 1.5 mm long, ciliate, with 2–3 mm long hairs.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, truncate, 4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, attached transversely. Spikelet callus hairs dark brown.


Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 4 mm long, 0.9 length of spikelet, hyaline, 0 -veined, without midvein, without lateral veins, pubescent, hairy above, bearing dark brown hairs, obtuse. Fertile lemma linear, 4.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma margins ciliate. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma
awn from a sinus, geniculate, 15 mm long overall, with twisted column. Column of lemma awn 10 mm long, hispidulous. Palea hyaline, without keels. Palea surface scabrous.

**Flower and Fruit.** Lodicules absent. Anthers 2, 2.5 mm long.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.

**Country /Province /State.** China. China South Central, China Southeast. **Indo-China.** Myanmar, Thailand, Vietnam.

Anhui, Guangdong, Guangxi, Jiangxi, Zhejiang, Yunnan.


**Illustrations (Journals):** *Brittonia* (37: 24, Fig.1, 26, Fig.2 (1985)).

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Bahia Province, Brazil.

**Classification.** Subfamily Bambusoideae. Tribe: Olyreae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths absent. Culms erect or geniculately ascending, 20–50 cm long. Culm-internodes thin-walled. Lower branches lacking. Leaves cauline, 5–9 per branch. Leaf-sheaths outer margin hairy. Ligule a ciliolate membrane, 0.3–0.5 mm long. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long, petiole pilose. Leaf-blades drooping, lanceolate or ovate, 5.5–7 cm long, 21–26 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence (or some all male).

**Inflorescence.** Inflorescence a panicle, comprising 1 fertile spikelets (and 8–10 male), terminal and axillary. Axillary inflorescences present throughout the plant. Panicle open, linear, 1.4–2.5 cm long, bearing few spikelets. Panicle branches hispid. Sexes segregated, on unisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled, 2–3 in a cluster. Pedicels present, clavate, ciliate.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, dorsally compressed, 13–14.5 mm long, 3 mm wide, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent, truncate.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 13–14.5 mm long, 1.1 length of upper glume, membranous, pallid, without keels, 9 -veined. Lower glume lateral veins with cross-veins. Lower glume surface scabrous, rough above. Lower glume apex attenuate. Upper glume elliptic, 12–13 mm long, 1.6 length of adjacent fertile lemma, membranous, pallid, without keels, 7–9 -veined. Upper glume lateral veins with cross-veins. Upper glume surface scabrous, rough above. Upper glume apex acute or acuminate.

**Florets.** Fertile florets female. Fertile lemma elliptic, dorsally compressed, 7.3–8.1 mm long, 2.5–2.9 mm wide, indurate, yellow or light brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins pubescent. Lemma apex acute. Palea indurate. Palea apex undifferentiated or papillose.

**Flower and Fruit.** Lodicules 3, 0.4 mm long, membranous. Anthers 3, 2 mm long. Stigmas 2. Caryopsis light brown. Hilum linear, 1 length of caryopsis.

Male spikelets distinct from female, 1 flowered, elliptic, 4–4.5 mm long. Male spikelet glumes absent. Male spikelet lemma 3 -veined.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America, Brazil. Venezuela. Brazil Northeast.

Bahia.


**Illustrations (Books):** W.Burger, Flora Costaricensis 15, Gramineae: Fieldiana Botany New Series 4 (1980) (500, Fig. 189 as Raddia), E.J.Judziewicz et al, American Bamboos (1999) (266, Fig. 162).


**Classification.** Subfamily Bambusoideae. Tribe: Olyreae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths absent. Culms geniculately ascending, 20–40 cm long, wiry. Leaves cauline, distichous. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades spreading, lanceolate, 3.5–4.5 cm long, 4.5–9 mm wide. Leaf-blade surface pilose, densely hairy, hairy abaxially, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

**Inflorescence.** Inflorescence a panicle, comprising 1 fertile spikelets (and 5–10 male), terminal and axillary. Axillary inflorescences present in upper axils or in lower axils. Panicle open, lanceolate, 1.5–2 cm long, bearing few spikelets. Sexes segregated, on unisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, dorsally compressed, 8–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, woolly, truncate.

**Glumes.** Glumes deciduous, similar, with lower wider than upper, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 8–9 mm long, 1 length of upper glume, membranous, pallid, without keels, 11 -veined. Lower glume apex acuminate. Upper glume elliptic, 8–9 mm long, 1.5 length of adjacent fertile lemma, membranous, pallid, without keels, 9 -veined. Upper glume apex acuminate.

**Florets.** Fertile florets female. Fertile lemma elliptic, dorsally compressed, 5.5 mm long, indurate, without keel, 5 -veined, more than 3 -veined. Lemma surface pilose, hairy below. Lemma apex acute. Palea 1 length of lemma, indurate, 6 -veined.

**Flower and Fruit.** Lodicules 3, membranous, truncate. Anthers 3. Stigmas 2, terminally exserted, sparsely hairy.

Male spikelets distinct from female, 1 flowered, lanceolate, 3–3.7 mm long. Male spikelet glumes absent. Male spikelet lemma 3 -veined.

**Distribution (TDWG).** Continent. South America.

Country /Province /State. Mesoamerica. Costa Rica, Panama.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Olyreae.

with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long, petiole pubescent. Leaf-blades lanceolate, 8–14 cm long, 15–30 mm wide. Leaf-blade surface glabrous. Leaf-blade margins serrulate, ciliate. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence (or some all male).

**Inflorescence.** Inflorescence a panicle, comprising 1 fertile spikelets (and 5–20 male), terminal and axillary. Axillary inflorescences present throughout the plant. Panicle open, linear, 4–8 cm long, bearing few spikelets. Sexes segregated, on unisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled, 2 in a cluster. Pedicels present, clavate (female) or linear (male), scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, dorsally compressed, 13–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, truncate.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 13–22 mm long, 1 length of upper glume, membranous, pallid, without keels, 9–11 -veined. Lower glume lateral veins with cross-veins. Lower glume apex caudate. Upper glume elliptic, 13–22 mm long, 1.5 length of adjacent fertile lemma, membranous, pallid, without keels, 8–9 -veined. Upper glume lateral veins with cross-veins. Upper glume apex caudate.

**Florets.** Fertile florets female. Fertile lemma lanceolate or ovate, dorsally compressed, 8.5–10.3 mm long, indurate, pallid or mid-green, mottled with last colour, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy above or below. Lemma margins pubescent, hairy below. Lemma apex apiculate. Palea lanceolate, indurate, 9–10 -veined. Palea surface pubescent, hairy on back, hairy above.

**Flower and Fruit.** Lodicules 3, 1.1–1.2 mm long, membranous. Anthers 3, 1.9–2 mm long. Stigmas 2. Male spikelets distinct from female, 1 flowered, linear or lanceolate, 3.2–6.4 mm long. Male spikelet glumes absent. Male spikelet lemma 3 -veined, awned, with 1 mm long awn.


**TYPE** from Brazil. **Basionym or Replaced Name:** *Olyra flaccida* Doell, *Mart. Fl. Bras.* 2(2): 326 (1877)


**Illustrations (Books):** E.Judziewicz, *Flora of the Guianas*, 187. Poaceae (1990) (60, Fig. 7).

**Derivation** (Clifford & Bostock 2007): L. unable to support its own weight. Inflorescence branches long and thin and so droop.

**Classification.** Subfamily Bambusoideae. Tribe: Olyreae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths absent. Culms geniculately ascending, 15–27 cm long, 3–4 -noded. Culm-internodes solid. Culm-nodes constricted. Lateral branches lacking. Leaves cauline, 5–8 per branch. Leaf-sheaths ribbed. Ligule a ciliolate membrane, 0.4–0.6 mm long, truncate. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.1 cm long, petiole glabrous. Leaf-blades lanceolate or ovate, 4–5 cm long, 8–10 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence (or some all male).

**Inflorescence.** Inflorescence a panicle, comprising 1 fertile spikelets (and 5–8 male), terminal and axillary. Axillary inflorescences present throughout the plant. Panicle open, linear, 4–5 cm long, bearing few spikelets. Sexes segregated, on unisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled, 1–2 in a cluster. Pedicels present, clavate (female) or linear (male).

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets lanceolate or obovate, dorsally compressed, 8.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, truncate.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma, incurved at apex. Lower glume elliptic, 8.5 mm long, 1.6 times length of upper glume, membranous, pallid, without keels, 5–6 -veined. Lower glume lateral veins with cross-veins. Lower glume apex attenuate. Upper glume elliptic, 8 mm long, 1.6 times length of adjacent fertile lemma, membranous, pallid, without keels, 5–6 -veined. Upper glume lateral veins with cross-veins. Upper glume apex attenuate.

**Florets.** Fertile florets female. Fertile lemma elliptic or ovate, dorsally compressed, 5 mm long, indurate, pallid, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma surface pubescent, hairy at base. Lemma margins pubescent. Lemma apex acute. Palea indurate.

**Flower and Fruit.** Lodicules 3, 0.5 mm long, membranous. Anthers 3, 1.8–2 mm long. Stigmas 2.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America, Western South America, Brazil. French Guiana, Guyana, Surinam. Colombia. Brazil North, Brazil South.


**TYPE** from Costa Rica, Piedras Blancas to Rincon de Osa: Grayum et al. 3402 (MO holo, CR, US).

**Illustrations (Journals):** *Novon* (2: 95, Fig. 6 (1992)).


**Classification.** Subfamily Bambusoideae. Tribe: Olyreae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths absent. Culms erect or geniculately ascending, 35–50 cm long, 4–5 -noded. Culm-internodes terete, thin-walled, glandular (spot near node). Culm-nodes black, glabrous. Lateral branches lacking. Culm-sheaths present. Leaves cauline, 5–8 per branch, distichous. Leaf-sheaths hirsute. Ligule a ciliolate membrane, 0.2–0.4 mm long. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.1–0.15 cm long, petiole pilose. Leaf-blades elliptic or oblong, 5–10 cm long, 16–30 mm wide. Leaf-blade surface pilose, sparsely hairy or moderately hairy, hairy abaxially or on both sides. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence (or some all male).

**Inflorescence.** Inflorescence a panicle, comprising 1 fertile spikelets (and 8–16 male), terminal and axillary, with 1–5 peduncles per sheath. Axillary inflorescences present in upper axils. Panicle open, linear, 1.5–4 cm long, bearing few spikelets. Sexes segregated, on unisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled, 2 in a cluster. Pedicels present, linear (male) or clavate (female).

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, dorsally compressed, 13.5–15 mm long, 2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, glabrous, truncate.

**Glumes.** Glumes deciduous, similar, with lower wider than upper, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 13.5–15 mm long, 1 length of upper glume, membranous, pallid, without keels, 7 -veined. Lower glume lateral veins with cross-veins. Lower glume apex attenuate. Upper glume lanceolate, 13.5–15 mm long, 1.6 times length of adjacent fertile lemma, membranous, pallid, without keels, 7 -veined. Upper glume lateral veins with cross-veins. Upper glume apex attenuate.

**Florets.** Fertile florets female. Fertile lemma elliptic or oblong, dorsally compressed, 8.7 mm long, 2.3 mm wide, indurate, pallid, shiny, without keel. Lemma surface with distinct germination flap, pubescent, hairy below. Lemma margins ciliate. Lemma apex acute. Palea 1 length of lemma, indurate, 4 -veined.
**Flower and Fruit.** Lodicules 3, 1 mm long, membranous, veined. Anthers 3, 1.2–1.6 mm long.

Stigmas 2.

Male spikelets distinct from female, 1 flowered, linear or lanceolate, 3.8–5.2 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3-veined, awned, with 0.1–0.5 mm long awn.

**Distribution (TDWG).** Continent. South America.


**Illustrations (Journals):** *Brittonia* (37: 28, Fig.3 (1985)).

**Derivation** (Clifford & Bostock 2007): L. *lanceus*, lance; *folium*, leaf. Leaf-blade lanceolate.

**Classification.** Subfamily Bambusoideae. Tribe: Olyreae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths absent. Culms erect or geniculately ascending, 30–40 cm long, 3-4 -noded. Culm-internodes thin-walled. Culm-nodes brown. Lateral branches lacking. Leaves cauline, 4–8 per branch. Leaf-sheaths outer margin hairy. Ligule a ciliolate membrane, 0.5–0.7 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2 cm long, petiole pilose. Leaf-blades linear or lanceolate, 10–14.5 cm long, 8–13 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence (or some all male).

**Inflorescence.** Inflorescence a panicle, comprising 1 fertile spikelets (and 8–10 male), terminal and axillary. Axillary inflorescences present in upper axils or in lower axils. Panicle open, linear, 1.5–2 cm long, bearing few spikelets. Panicles branches pubescent. Sexes segregated, on unisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled, 2 in a cluster. Pedicels present, clavate (female) or linear (male), ciliate.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, dorsally compressed, 18–20 mm long, 2.1–2.9 mm wide, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, truncate.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 18–20 mm long, 1.1 length of upper glume, membranous, pallid, without keels, 9 -veined. Lower glume lateral veins with cross-veins. Lower glume surface scabrous, rough at apex. Lower glume apex acuminate. Upper glume elliptic, 16–18 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, pallid, without keels, 9–10 -veined. Upper glume lateral veins with cross-veins. Upper glume apex acuminate.

**Florets.** Fertile florets female. Fertile lemma lanceolate, dorsally compressed, 10.8–12.6 mm long, 2.5 mm wide, indurate, pallid, shiny, without keel, 7 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins pubescent. Lemma apex acuminate. Palea indurate, 8–9 -veined. Palea surface pubescent, hairy on back.

**Flower and Fruit.** Lodicules 3, 1 mm long, membranous. Anthers 3, 1.7 mm long. Stigmas 2.

Male spikelets distinct from female, 1 flowered, lanceolate, 5–6.7 mm long. Male spikelet glumes absent. Male spikelet lemma 3-veined.

**Distribution (TDWG).** Continent. South America.

Country /Province /State. Mesoamerica. Panama.


Illustrations (Journals): *Novon* (1:77, Fig.1 (1991)).

Derivation (Clifford & Bostock 2007): from Venezuela.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths absent. Culms erect or geniculately ascending, 40–60 cm long. Culm-internodes thin-walled, distally glabrous or pubescent. Culm-nodes pubescent. Lateral branches lacking. Leaves cauline, 5–7 per branch. Leaf-sheaths striately veined, with a brief petiolo-like connection to sheath, petiolo 0.2 cm long, petiolo pubescent. Leaf-blades lanceolate or ovate, 8–10.5 cm long, 25–35 mm wide. Leaf-blade surface glabrous or puberulous, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence a panicle, comprising 1 fertile spikelets (and 3–5 male), terminal and axillary, embraced at base by subtending leaf, with 3–6 peduncles per sheath. Panicle contracted, linear, 1–2 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Sexes segregated, on unisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, clavate (female) or filiform (male).

Fertile Spikelets. Spikelets comprising 1 fertile florets, without Rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, dorsally compressed, 9–12.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4–0.7 mm long, truncate.

Glumes. Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–12.5 mm long, 1.1 length of upper glume, chartaceous, pallid, without keels, 7–9 -veined. Lower glume apex attenuate, awned, 1 -awned , awn 1–3 mm long. Upper glume lanceolate, 8–10 mm long, 1.3–1.5 length of adjacent fertile lemma, chartaceous, pallid, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma elliptic, dorsally compressed, 6–6.7 mm long, 2.3–2.5 mm wide, indurate, pallid, shiny, without keel. Lemma surface pubescent, hairy above and at base. Lemma margins pubescent. Lemma apex acute. Palea indurate. Palea surface glabrous or puberulous, hairy above.

Flower and Fruit. Lodicules 3, 0.3 mm long, membranous. Anthers 3, 2–2.5 mm long. Stigmas 2. Male spikelets distinct from female, 1 flowered, linear or lanceolate, 4–5 mm long. Male spikelet glumes absent. Male spikelet lemma 3 -veined.

Distribution (TDWG). Continent: South America.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 100–150 cm long, with 0.5 of their length below uppermost node. Culm-internodes distally glabrous. Ligule an eciliate membrane, 3–5 mm long. Leaf-blades 7–8 mm wide. Leaf-blade surface scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 10–20 cm long, 3–5 cm wide. Primary panicle branches 8–10 cm long, bearing 15–20 fertile spikelets on each lower branch, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.
**Fertile Spikelets.** Spikelets comprising 1 fertile floret, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.75 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2.4–3.6 mm long, 0.75–0.9 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2.4–3.6 mm long, membranous, much thinner above, keeled, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma lateral veins obscure, less than two thirds length of lemma. Lemma surface scaberulous, hispidulous. Lemma apex obtuse. Palea 1 length of lemma, 2 -veined. Palea keels scaberulous. Palea surface puberulous.

**Flower and Fruit.** Anthers 3, 1–2.4 mm long. Ovary glabrous. Caryopsis with adherent pericarp.


**Basionym or Replaced Name:** Colpodium latifolium R. Br., *Parry, 1st Voy. Suppl.* p. 186 (1824).


**Derivation** (Clifford & Bostock 2007): L. latus, broad; folium, leaf. Leaf-blades broad or relatively broad with respect to related species.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated. Culms 15–120 cm long. Ligule an eciliate membrane, 2–5 mm long, lacerate. Leaf-blades 10–15 cm long, 6–12 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, 3–10 cm long. Primary panicle branches 3–5 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.75 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 0.75 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2.5–6 mm long, membranous, much thinner above, purple, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins obscure, less than two thirds length of lemma. Lemma surface scaberulous. Lemma apex obtuse. Palea 1 length of lemma, 2 -veined. Palea keels scaberulous. Palea apex obtuse.

**Flower and Fruit.** Anthers 3, 2 mm long, purple. Ovary glabrous. 2n = 56 (3 refs TROPICOS).


**Basionym or Replaced Name:** *Poa fulva* Trin., *Mem. Acad. Petersb. Ser.* 6(1) 378. (1831).


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Inflorescence.** Inflorescence a panicle. Panicle open, pyramidal or ovate, 4–17 cm long. Primary panicle branches ascending or drooping or reflexed. Panicle branches capillary, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear or oblong.

**Fertile Spikelets.** Spikelets comprising 2–6 fertile florets, without rhachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or ovate, laterally compressed, 2.5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 0.75 length of upper glume, membranous, 1-keeled, (1–)3 -veined. Lower glume apex acute. Upper glume ovate, 0.9–1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 2–4 mm long, membranous, much thinner above, yellow, keeled, lightly keeled, 3 -veined, 0–3 -veined. Lemma lateral veins obscure, less than two thirds length of lemma. Lemma apex erose, acute. Palea 0.75 length of lemma, 2 -veined. Palea keels smooth. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum elliptic.

$2n = 42$ (3 refs TROPICOS).

**Distribution (TDWG). Continent.** Europe, Temperate Asia, North America.

**Region.** Northern Europe, Eastern Europe.


**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Derivation** (Clifford & Bostock 2007): L. emineo, stand out. Conspicuous with respect to inflorescence.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 2–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 7–11.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes smooth. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume elliptic, 5–6 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume elliptic, 7–8 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, oblong in profile, 7–8 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma midvein ciliate. Lemma surface puberulous to pilose. Lemma margins ciliate. Lemma apex acute. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 2.3–4 mm long. Caryopsis with adherent pericarp. Hilum punctiform.

n = 21 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Temperate Asia, North America.


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 3–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6.5–8.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.


**Florets.** Fertile lemma ovate, 3.5–5.5 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma midvein ciliate. Lemma margins ciliate. Lemma apex acute. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.
**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 2–3 mm long. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Siberia, China, Mongolia, Russia. Altay. Inner Mongolia, Qinghai, Xinjiang. Mongolia.


**Illustrations (Books):** S.L. Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 362 as *P. tibetica* var. *tibetica*).

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to. From Tibet.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or oblong, laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes smooth. Floret callus glabrous.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate or elliptic, 2.8–4.5 mm long, 0.8 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex erose, acute. Upper glume lanceolate or elliptic, 3.5–5.5 mm long, 0.9 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex erose, acute.

**Florets.** Fertile lemma ovate, elliptic in profile or oblong in profile, 4–5.25 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma midvein ciliate. Lemma surface asperulous. Lemma margins ciliate. Lemma apex acute. Palea 0.9 length of lemma. Palea keels scabrous or spinulose, adorned below (spinulose). Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 1.5–2.5 mm long. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Illustrations:** None found.


Fertile Spikelets. Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or oblong, laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes smooth. Floret callus glabrous.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate or elliptic, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex erose, acute. Upper glume lanceolate or elliptic, 0.9 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex erose, acute.

Florets. Fertile lemma ovate, 4–5.25 mm long, membranous, keeled, 7 -veined, more than 3-veined. Lemma midvein ciliate. Lemma surface asperulous, pilose, hairy on veins. Lemma margins ciliate. Lemma apex acute. Palea 0.9 length of lemma. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.5–2.5 mm long. Caryopsis with adherent pericarp. Hilum punctiform.


Inflorescence. Inflorescence a panicle. Panicle open, elliptic, dense or loose, 15–40 cm long. Primary panicle branches naked below or bearing spikelets almost to the base. Panicle branches straight or flexuous, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, bearded, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–7 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute to acuminate. Upper glume lanceolate, 6–7 mm long, 1.2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute to acuminate.

Florets. Fertile lemma lanceolate, subterete, 5–6 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma apex
dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, straight, 10–15 mm long overall. Palea elliptic, 0.8 length of lemma, coriaceous, 2-veined, without keels. Palea surface pilose.


**Distribution (TDWG).** Continent. Africa.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. '-ab-', away from; *norma*, model. Differing from the expected.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect, 10–30(–40) cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 5–10 cm long, 0.5–1 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, effuse, 5–10 cm long, with spikelets clustered towards branch tips. Primary panicle branches appressed or ascending, 1–2-nate. Spikelets solitary, Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–10(–14) mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pilose, obtuse.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5.5–10 mm long, 1 length of upper glume, membranous, 1-keeled, 3-veined. Lower glume primary vein scaberulous. Lower glume apex setaceously acuminate. Upper glume lanceolate, 5.5–10 mm long, 0.7–0.8 length of adjacent fertile lemma, membranous, 1-keeled, 3-veined. Upper glume apex dentate, 2-fid, mucronate.

**Florets.** Fertile lemma elliptic, subterete, 7–10(–14) mm long, coriaceous, keeled, 3-veined, 0–3-veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 1-awned or 3-awned. Principal lemma awn curved or 3-branched, with (7.5–)15–25 mm long limb, with twisted column, persistent. Column of lemma awn 3.5–10 mm long. Lateral lemma awns absent or present, 0–15 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa, Temperate Asia, Tropical Asia.


**TYPE** from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *G. Hieronymus s.n.*, 24–25 Mar 1875, Argentina: Csdoba: Sierra de Achala, Paso de la Higuera al pie de la Cuesta de Arjel (B; IT: US-81028 (fragm. ex B / photo)).


**Illustrations (Journals):** *Darwiniana* (41: 158, fig.1 &160, fig.2 (2003)).

**Derivation** (Clifford & Bostock 2007): L. '-ensis', denoting origin. From Sierra Achala, Argentina.

Habit, Vegetative Morphology. Annual. Culms 55–70 cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.1 mm long. Collar glabrous. Leaf-blades curled (lower) or straight (upper), flat (lower) or conduplicate (upper), 20–25 cm long, 1.5–2.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, smooth.

Inflorescence. Inflorescence a panicle. Panicle spiciform, 12–16 cm long. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, (0.5–0.6 mm long, pilose, acute (subacute).


Florets. Fertile lemma subterete, 4–5 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above, with a median groove (ventral, longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 16–20 mm long limb, with twisted column. Column of lemma awn 2–3.2 mm long. Lateral lemma awns present, ascending, 14–16.5 mm long, shorter than principal.

Distribution (TDWG). Continent. South America.


Illustrations (Journals): Austr. Syst. Bot. (5: 182, Fig.8 (1992)), Proc.Roy.Soc.Qld. (51:176,Pl.4 (1940)).

Derivation (Clifford & Bostock 2007): L. acu , sharpen; glumes sharp-pointed.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 40–125 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate, 3–4 mm long. Ligule a fringe of hairs, 0.5 mm long. Collar glabrous or pubescent. Leaf-blades filiform, involute, 7–13 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially or on both sides.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear or elliptic, 15–30 cm long, 1–10 cm wide. Primary panicle branches 3–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7.7–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, hairy on the surface or on the margins, acute.

Glumes. Glumes deciduous, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7.7–15 mm long, 1.1–1.2 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent or obscure. Lower glume apex acute or acuminate, aawned, 1 -awned, aawn 1–3 mm long. Upper glume lanceolate, 6.5–14 mm long, 1–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate, aawned, 1 -awned, aawn 1–3 mm long.
Florets. Fertile lemma lanceolate, subterete, 7–9 mm long, coriaceous, pallid or light brown, concolorous or mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea, without distinctive roughness. Lemma apex acute, awned, 3 -awned. Principal lemma awn flat below, with 13–22 mm long limb, without a column, persistent. Lateral lemma awns present, 9–18 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 4.5–6 mm long. Hilum linear, 0.2 length of caryopsis.


Inflorescence. Inflorescence a panicle. Panicle spiciform, linear or oblong, continuous or interrupted, 5–20 cm long, 1 cm wide. Panicle branches pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–11 mm long, 0.9–1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, muticous or mucronate or awned, awn 0–2 mm long. Upper glume lanceolate, 8–11 mm long, 1.3–1.4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate, muticous or mucronate or awned, 1 -awned, awn 0–2 mm long.

Florets. Fertile lemma elliptic, subterete, 6–8 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 15–22 mm long limb, without a column, persistent. Lateral lemma awns present, 15–22 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Aristida adscensionis L. Sp. Pl. 82. (1753).


Aristida depressa Retz., Obs. iv. 22 (1786). HT: König s.n., India: in sterilioribus Malabariae (S; IT: B-W, M).

Aristida coerulea A. Desf., Fl. Atlant. i. 109 (1798).


Aristida elatior Cav., Iv. vi. 65 (1801). Habitat in aridis et saxosis prope mare Alberatem et Callossam oppida Orcellitana Regni Valentini. Augusto florida m, oppida Orcellitana Regni Valentini. Augusto florida m, (HT: herb. Ludovic. Nie) According to Henrard, Meded. Rijks-Herb. 54(A): 318 (1927), the specimen was mislabeled and really originated in Argentina.

Aristida racemosa, Spreng., Mant. i. 35. (1807). Ex insula St. Helenae.,


Illustrations (Journals): Ruizia (13:233, Fig 26f (1993)).


Derivation (Clifford & Bostock 2007): from Ascension Island in the Atlantic Ocean.


Habit, Vegetative Morphology. Annual or perennial. Culms erect or geniculately ascending or decumbent, 10–100 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 5–20 cm long, 1–3 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, elliptic, 10–30 cm long, evenly furnished or contracted about primary branches. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5 mm long, pilose, obtuse.

Glumes. Glumes persistent, similar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 4–7 mm long, 0.8 length of upper glume, scarious, 1-keeled, 1 - veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex emarginate or acute, muticous or mucronate. Upper glume lanceolate, 5–10 mm long, 0.75–1 length of

Florets. Fertile lemma elliptic, laterally compressed, 5–13 mm long, coriaceous, keeled, 3-veined, 0–3-veined. Lemma midvein scabrous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3-awned. Principal lemma awn with 7–25 mm long limb, persistent. Lateral lemma awns present, 5–25 mm long, subequal to principal or shorter than principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3.

n = 11 (4 refs TRPOICOS). 2n = 22 (3 refs TRPOICOS).


Region. Northern Europe (*). Southwestern Europe. Southeastern Europe.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Derivation (Clifford & Bostock 2007): L. aemulor, come near to. Rather similar to another species.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3–0.4 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.5–4 mm long, 0.6–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex emarginate or obtuse or acute, mucronate. Upper glume lanceolate, 6–7 mm long, 1.7–1.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface smooth or asperulous, rough above. Upper glume apex emarginate or obtuse or acute, mucronate.

Florets. Fertile lemma elliptic, subterete, 3.5–4 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex rostrate, with a short cylindrical neck, with this appendage 0.5–1 mm long, awned, 3 -awned. Principal lemma awn 3-branched, with 12–15 mm long limb, persistent. Lateral lemma awns present, 8–10 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Country /Province /State. West-Central Tropical Africa, South Tropical Africa. DRC. Zambia.


Illustrations: None found.


Inflorescence. Inflorescence a panicle. Panicle open or contracted, lanceolate or oblong, 6–15 cm long. Primary panicle branches 1–2 -nate, 2–4 cm long, bearing 1–3 fertile spikelets on each lower branch. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5.5–9.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pilose, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets or reaching apex of florets, thinner than fertile lemma, parallel to lemmas or recurved at apex. Lower glume lanceolate, 5–9 mm long, 0.9–1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acuminate, awned, 1 -awned, awn 0.5–1.5 mm long. Upper glume lanceolate, 5.5–9.5 mm long, 1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface scabrous. Upper glume apex dentate, 2 -fid, mucronate.

Florets. Fertile lemma elliptic, subterete, 6–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 15–25 mm long limb, with twisted column, persistent. Column of lemma awn 2–8 mm long. Lateral lemma awns present, 13–20 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 635).

Derivation (Clifford & Bostock 2007): L. *alpes*, high mountain; *-ina*, belonging to. Species growing at high altitudes.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 12–22 cm long, 0.5–1 mm diam., 1–2 -noded. Leaves mostly basal. Leaf-sheath oral hairs lacking or ciliate. Ligule a fringe of hairs. Leaf-blades involute, 10–30 cm long, 1–2 mm wide, glaucous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse. Floret callus hairs 0.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–12 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acuminate. Upper glume lanceolate, 12 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, suberete, 10 mm long, coriaceous, dark brown or black, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn straight, with 10 mm long limb, persistent. Lateral lemma awns present, 3–5 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Culms 35–47 cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.1 mm long. Collar glabrous. Leaf-blades straight, conduplicate, 10–14 cm long, 1.8–2 mm wide. Leaf-blade surface scabrous, rough adaxially, pilose, sparsely hairy, hairy adaxially. Leaf-blade apex obtuse, smooth.

Inflorescence. Inflorescence a panicle. Panicle contracted (or subcontracted), 15–29 cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets suberete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.8 mm long, pilose, acute (subacute).
Glumes. Glumes persistent, dissimilar (lower longer than upper sometimes subequal). Lower glume lanceolate, 6.5–8 mm long, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acute (shortly awned), muticous or mucronate. Upper glume lanceolate, 6.2–7(–7.8) mm long, 1 -veined. Upper glume surface smooth. Upper glume apex entire, acute (shortly awned).

Florets. Fertile lemma subterete, 8–9 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight (or slightly bent), ascending or spreading, simple at base, with 16.5–20 mm long limb, without a column. Lateral lemma awns present, ascending, 14.2–18 mm long, shorter than principal (slightly).


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations (Books): J.Bosser, Graminées des Paturage et des Cultures a Madagascar (1969) (101, Fig. 28).


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–3 mm long, pubescent, pungent.


Florets. Fertile lemma lanceolate, subterete, 0–10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 35–45 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 8–13 mm long. Lateral lemma awns present, 30–35 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Country /Province /State. Western Indian Ocean. Madagascar.


Illustrations: None found.
Derivation (Clifford & Bostock 2007): L. *amplexus*, encircling; *folium*, leaf. Leaf-blades cordate and amplexicaule.


Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 20–30 cm long, 3 -noded. Culm-internodes elliptical in section. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate, 3 mm long. Ligule a fringe of hairs. Collar pubescent. Leaf-blades straight or curved or flexuous, conduplicate, 8–17 cm long, 0.5–1 mm wide. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough on both sides. Leaf-blade margins scaberulous. Leaf-blade apex filiform.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, obtuse.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or lanceolate, 7.5–11 mm long, 0.75 length of upper glume, membranous, 3 -veined. Lower glume primary vein ciliolate. Lower glume surface asperulous, rough on veins. Lower glume apex entire or dentate, 2 -fid, mucronate. Upper glume linear or lanceolate, 10–13 mm long, 1.2–1.4 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex entire or dentate, 2 -fid, mucronate.

Florets. Fertile lemma linear, subterete, 8.5–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 17–20 mm long limb. Lateral lemma awns present, 13–15 mm long, shorter than principal. Palea 1.5 mm long, 0.15 length of lemma, hyaline, 0 -veined.

Flower and Fruit. Lodicules 2, 1 mm long. Anthers 3, 2 mm long. Caryopsis with adherent pericarp.


TYPE from Socotra. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Socotra: Radcliffe-Smith / Lavranos 605 (K holo).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk ana, not; klastos, broken in pieces. Awn without an articulation.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 25–35 cm long. Ligule a fringe of hairs. Leaf-blades curled, aciculate, involute, 2–5 cm long, 1 mm wide, coriaceous, stiff.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–10.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pilose, obtuse.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 7–8 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, mucronate. Upper glume lanceolate, 8.5–9 mm long, 0.8–0.9 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

Florets. Fertile lemma lanceolate, subterete, 10–10.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea.
Lemma apex acute, awned, 3-awned. Principal lemma awn 3-branched, spreading, with 12–16 mm long limb, without a column, persistent. Lateral lemma awns present, spreading less than principal, 9–10 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Northeast Tropical Africa. Socotra.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk. anisos, unequal; chaete, bristle. Central branch of trifid awn much longer than the two laterals.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 40–60 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades convolute, 3–9 cm long, 0.5–1.5 mm wide, stiff, glaucous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–12.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1 mm long, pubescent, with longer hairs above, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–7 mm long, 0.4–0.6 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume linear, 10–12.5 mm long, 3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminata.

**Florets.** Fertile lemma lanceolate, subterete, 3.5–4 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 45–65 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 5 mm long. Lateral lemma awns present, 8–12 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Northeast Tropical Africa. Eritrea, Somalia.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–100 cm long, 1–2 mm diam. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode. smooth, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades flat or convolute, 10–35 cm long, 1–1.5 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins cartilaginous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, effuse, 25–50 cm long, 10–20 cm wide, with spikelets clustered towards branch tips. Primary panicle branches 2–3 -nate. Panicle axis scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 11.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 11.5 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute, awned, 1 -awned, awn 2 mm long. Upper glume lanceolate, 10.5 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 2 mm long.

**Florets.** Fertile lemma linear or lanceolate, suberete, 9 mm long, coriaceous, without keel. Lemma surface punctate. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 20 mm long limb, without a column or with a straight or slightly twisted column, persistent. Column of lemma awn 0–1 mm long. Lateral lemma awns present, 13 mm long, shorter than principal. Palea absent or minute.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indo-China. Vietnam.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 211, Fig.15 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose, clumped loosely. Culms 25–50 cm long, 2–3 -noded. Culm-internodes smooth, distally glabrous. Lateral branches sparse. Ligule a fringe of hairs, 1 mm long. Leaf-blades 7–15 cm long, 1–1.5 mm wide. Leaf-blade surface pubescent, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, effuse, 10–20 cm long, 5–12 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 7–8.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute. Floret callus hairs 1 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6.5–7.5 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex acute or acuminate, awned, 1 -awned, awn 1–1.5 mm long. Upper glume lanceolate, 7–8.5 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous or scabrous. Upper glume apex acute or acuminate, awned, 1 -awned, awn 1–1.5 mm long.

**Florets.** Fertile lemma lanceolate, suberete, 5.5–6.5 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel; 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 8–12 mm long limb, without a column, persistent. Lateral lemma awns present, 8–12 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp. Hilum linear, 0.5 length of caryopsis.


**TYPE** from Australia. **Basionym or Replaced Name:** *Aristida adscensionis* var. *anthoxanthoides* Domin, *Bibliotheca Botanica* 85(2): 343, t. 15, f. 9–12 (1915). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *M. Koch 305*, Oct 1899, Australia: South Australia: Mt. Lyndhurst, Flinders Ranges station (K; IT: BRI (photo, fragm.)).


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 182, Fig.8 (1992)).


**Derivation** (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to Anthoxanthum.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose, clumped loosely. Culms 15–30 cm long, 2–3 -noded. Culm-internodes smooth, distally glabrous. Lateral branches lacking or sparse. Leaf-sheaths antrorsely scabrous, glabrous on surface. Leaf-sheath oral hairs lacking or ciliate. Ligule a fringe of hairs, 0.5 mm long. Collar glabrous. Leaf-blades 4–9 cm long, 1.5 mm wide. Leaf-blade surface scabrous, rough adaxially, pilose, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, oblong, 8 cm long, 2.5–4 cm wide. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–8 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Lower glume apex emarginate or acute or acuminate. Upper glume lanceolate, 4–7 mm long, 0.8–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth to scabrous. Upper glume apex acute or acuminate, mucronate.

**Florets.** Fertile lemma lanceolate, subterete, 5–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculare, rough above. Lemma margins involute, covering most of palea, without distinctive roughness. Lemma apex acute, awned, 3 -awned. Principal lemma awn flat below, with 10–15 mm long limb, without a column, persistent. Lateral lemma awns present, 10–15 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 5–6 mm long. Hilum linear, 0.2–0.3 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales.


**Illustrations (Journals):** *Darwiniana* (41: 164, fig.3 (2003)).

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating location. From San Antonio, Puno Province, Peru.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 10–30 cm long, 0 -noded. Leaves mostly basal. Ligule a fringe of hairs. Leaf-blades convolute, 2–12 cm long, 1–3 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 10–11 mm long, 1 length of upper glume, membranous. Lower glume primary vein ciliolate. Lower glume surface scabrous. Lower glume apex acute, muticous or mucronate. Upper glume linear, 10–11 mm long, 1 length of adjacent fertile lemma, membranous. Upper glume primary vein ciliolate. Upper glume surface scabrous. Upper glume apex acute, muticous or mucronate.

**Florets.** Fertile lemma linear, subterete, 8–10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 12–18 mm long limb. Lateral lemma awns present, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Southern South America. Bolivia, Peru. Argentina Northeast.

Jujuy, Salta, Tucuman.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. appressed. Lateral branches of panicle held erect.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with curly dead sheaths. Culms 30–60 cm long. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades flat or involute, 10–35 cm long, 1–4 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, equilateral or nodding, 10–25 cm long. Primary panicle branches appressed or ascending, 2–10 cm long. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets linear, subterete, 12–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–11 mm long, 0.75 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex setaceously acuminate, muticous or awned, 1 -awned, awn 1–2 mm long. Upper glume lanceolate, 12–14 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex setaceously acuminate, muticous or awned, 1 -awned, awn 1–2 mm long.

**Florets.** Fertile lemma linear, subterete, 8–12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 15–22 mm long limb, with twisted column. Column of lemma awn (2–)4–8 mm long. Lateral lemma awns present, 15–22 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Mexico. Central Mexico, Northeast Mexico, Southeast Mexico. Mesoamerica. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama.


**Images:** D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

**Derivation (Clifford & Bostock 2007):** L. dry. Growing in arid places.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 40–80 cm long, 2–4 -noded. Culm-internodes smooth, distally glabrous. Ligule a fringe of hairs, 0.3 mm long. Leaf-blades involute, 10–20 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute. Floret callus hairs 1–1.5 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–11 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute or acuminate, awned, 1 -awned, awn 1 mm long. Upper glume lanceolate, 8–13 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 7–11 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculate, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn flat below, with 11–24 mm long limb, without a column, persistent. Lateral lemma awns present, 11–24 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp. Hilum linear, 0.5 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Northern Territory, South Australia.

Central Australia. NW & Lake Eyre, Southern.


Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From Arizona, USA.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths withering or persistent and investing base of culm, with curly dead sheaths. Culms erect, 30–100 cm long. Leaf-sheaths without keel, outer margin glabrous or hairy. Leaf-sheath oral hairs lacking or ciliate. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades flat, 10–25 cm long, 1–3 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 13–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret calyx elongated, 1–1.5 mm long, pubescent, pungent.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–17 mm long, 0.9–1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex setaceously acuminata. Upper glume lanceolate, 13–18 mm long, 1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear, suberete, 13–16 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 20–35 mm long limb, with twisted column. Column of lemma awn 3–6 mm long. Lateral lemma awns present, 15–30 mm long, shorter than principal.

Flower and Fruit. Anthers 3.


Illustrations: None found.


hairs. Leaf-blades curved, convolute, 10–20 cm long, 2 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle open, linear or lanceolate, 5–10 cm long, 1 cm wide, contracted about primary branches. Primary panicle branches 1–2 -nate. Panicle axis smooth. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 11–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75 mm long, pubescent, acute.


**Florets.** Fertile lemma linear, subterete, 6.5–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 20–25 mm long limb. Lateral lemma awns present, 17–20 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus. Hilum linear.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Caribbean: Aruba.


Illustrations (Journals): *Darwiniana* (41: 167, fig.4 (2003) as var. pauciflora).


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, obtuse or acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 10 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume primary vein ciliolate. Lower glume lateral veins absent. Lower glume apex acuminate to setaceously acuminate. Upper glume linear, 10 mm long, 2 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acuminate to setaceously acuminate.

**Florets.** Fertile lemma linear, subterete, 5–6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-
branched, with 14–15 mm long limb, with twisted column. Column of lemma awn 3–4 mm long. Lateral lemma awns present, 9–11 mm long, shorter than principal. Palea hyaline, 0 -veined.

**Flower and Fruit.** Lodicules 2, 1.5 mm long. Anthers 3. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Southern South America. Bolivia, Ecuador. Argentina Northwest. Jujuy, Salta, TucUMAN.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 211, Fig.15 (1992)).

**Derivation** (Clifford & Bostock 2007): L. of the south. From the south in general as from Africa, America, Europe or elsewhere.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–65 cm long, 3–4 -noded. Culm-internodes glaucous, smooth, distally glabrous. Lateral branches ample. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades flexuous, 5–10 cm long, 2–3 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 8–24 cm long, 0.2–0.3 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, acute. Floret callus hairs 1.8 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent or obscure. Lower glume apex acute or acuminate, awned, 1 -awned, awn 1 mm long. Upper glume lanceolate, 13 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate, awned, 1 -awned, awn 1 mm long.

**Florets.** Fertile lemma lanceolate, subterete, 9–10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 14–17 mm long limb, without a column, persistent. Lateral lemma awns present, 14–17 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. South Australia. NW & Lake Eyre, Southern.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
Habit, Vegetative Morphology. Perennial. Culms robust, 100–120 cm long. Lateral branches lacking or sparse. Ligule a fringe of hairs. Leaf-blades filiform, flat or involute, 25–60 cm long, 3–4 mm wide, coriaceous. Leaf-blade surface smooth or scaberulous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, bearded, acute.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–9 mm long, 0.75 length of upper glume, membranous, 1-keeled. Lower glume primary vein scaberulous. Lower glume apex setaceously acuminate. Upper glume lanceolate, 10–12 mm long, 1 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled. Upper glume surface asperulous. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 3 mm long.

Florets. Fertile lemma linear, suberete, 12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma aawn 3-branched, with 20–40 mm long limb, with twisted column. Column of lemma aawn 4–5 mm long. Lateral lemma awns present, 15–30 mm long, shorter than principal.

Flower and Fruit. Anthers 3.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 7–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, pubescent, obtuse.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3–7 mm long, 0.4–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acute, awned, 1 -awned, awn 0.8–2 mm long. Upper glume lanceolate, 7–11 mm long, 1.8–2.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 1 mm long.

Florets. Fertile lemma elliptic, suberete, 4–5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma aawn 3-branched, with 12–28 mm long limb, with twisted
column, deciduous, abscissing from top of column. Column of lemma awn 2–4 mm long. Lateral lemma awns present, 12–28 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.


**Derivation** (Clifford & Bostock 2007): L. *basis*, base; *ramus*, branch. Culms much branched at the base.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 30–50 cm long. Culm-internodes smooth or scaberulous. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades flat or involute, 7–15 cm long, 0.7–1.5 mm wide. Leaf-blade surface scabrous, rough adaxially, pilose, sparsely hairy, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 10–12 mm long, 0.8 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate, mucronate. Upper glume linear, 12–15 mm long. 1.2–1.5 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acuminate, mucronate.

**Florets.** Fertile lemma linear, subterete, 10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lateral lemma scabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, ascending or briefly coiled at base of limb, with 10–15 mm long limb. Lateral lemma awns present, spreading as much as principal, 5–10 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Eastern Canada, Northwest USA, North-central USA, Northeast USA, South-central USA, Southeastern USA. Ontario. Illinois, Iowa, Kansas, Minnesota, Missouri, Oklahoma, Wisconsin, Maine, New Hampshire. New Mexico, Texas.


**TYPE** from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: China: Sichuan: Batang Xian, 2600–2700 m..

**Illustrations:** None found.
**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect or geniculately ascending, 50–70 cm long, 3–4 -noded. Leaf-sheaths loose, scaberulous. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blades straight or curved, involute, 3–15 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough abaxially.

**Inflorescence.** Inflorescence a panicle. Peduncle terete. Pedicel present, 1.5–6 mm long. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse. Floret callus hairs 0.2–0.8 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute or obtuse. Upper glume lanceolate, 8.5–9 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or obtuse.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, without keel, 3 -veined, 0–3 –veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn straight, with 7 mm long limb, persistent. Lateral lemma awns present, 5–6 mm long, shorter than principal. Palea 7–8 mm long, 1 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Anthers 3, 3 mm long, yellow.

**Distribution (TDWG), Continent.** Temperate Asia.

**Country /Province /State.** China. China South Central. Sichuan.


**Illustrations (Journals):** *Austr. Syst. Bot.* 5: 209, Fig.14 (1992).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 22–43 cm long, 1 -noded. Culm-internodes antrorse or scabrous, distally glabrous. Lateral branches lacking. Leaf-sheaths scabrous. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.3 mm long. Collar pubescent. Leaf-blades 10–25 cm long, 2–3 mm wide. Leaf-blade surface scabrous, rough axially.

**Inflorescence.** Inflorescence a panicle. Peduncle terete. Pedicel present, 8–13.5 cm long. Primary peduncle branches 0.4–0.8 cm long, bearing spikelets almost to the base. Panicle branches scabrous or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 15–19.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.7–1 mm long, pubescent, acute.
Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–11.6 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1 -awned, awn 0.2–0.5 mm long. Upper glume lanceolate, 15–19 mm long, 1.6–2.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute or acuminate, awned, 1 -awned, awn 1–2.5 mm long.

Florets. Fertile lemma lanceolate, subterete, 7–12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn spreading, flat below, with 16–66 mm long limb, without a column, persistent. Lateral lemma awns present, 13–53 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3, 1.1–1.4 mm long. Caryopsis with adherent pericarp, 6.6–8 mm long. Hilum linear, 0.5 length of caryopsis.


Illustrations (Journals): Austr. Syst. Bot. (5: 179, Fig.7 (1992)).


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 50–90 cm long, 2–3 -noded. Culm-internodes smooth, distally glabrous. Lateral branches lacking or sparse. Leaf-sheaths antorse scabrous, glabrous on surface. Leaf-sheath oral hairs pubescent or ciliate. Ligule a fringe of hairs, 0.3 mm long. Collar pubescent. Leaf-blades filiform or linear, flat or involute, 20–25 cm long, 3 mm wide. Leaf-blade surface scabrous, rough on both sides.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5.5–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.4 mm long, pubescent, acute. Floret callus hairs 0.2–1 mm long.

Glumes. Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.5–9 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex acute or acuminate, muticous or mucronate. Upper glume lanceolate, 5.5–9 mm long, 1.3–1.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous or scabrous. Upper glume apex emarginate or obtuse, muticous or mucronate.

Florets. Fertile lemma lanceolate, subterete, 3.5–7 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea, without distinctive roughness or scabrous. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 8–15 mm long limb, without a column, persistent. Lateral lemma awns present, 6–12 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 3–4 mm long.

Hilum linear, 0.25 length of caryopsis.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–120 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.05–0.3 mm long. Leaf-blades flexuous, involute, 20–40 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous, hairless except near base.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8.5–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4–0.6 mm long, pubescent, acute.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 7–10 mm long, 0.9 length of upper glume, membranous, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 1.5–2.5 mm long. Upper glume linear, 8.5–11 mm long, membranous, 1 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins absent. Upper glume hairs 2 mm long. Upper glume apex dentate, awned, 1 -awned, awn 1.5–2.5 mm long.

Florets. Fertile lemma linear, subterete, 6–8 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading, with 7–14 mm long limb. Lateral lemma awns present, spreading as much as principal, 6–12 mm long, shorter than principal.


Country /Province /State. Southeastern USA. North Carolina.


Illustrations (Journals): Austr. Syst. Bot. (5: 176, Fig6 (1992)).

Derivation (Clifford & Bostock 2007): L. bis, twice; glans, acorn; -ula, diminutive; -osa, possession. There are two swellings at the pedicel bases.
**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms robust, 60–120 cm long, 3–4 -noded. Culm-internodes glaucous, smooth, distally glabrous. Leaf-sheaths smooth or antrorsely scabrous, glabrous on surface. Leaf-sheath oral hairs lacking. Ligule a fringe of hairs, 0.5 mm long. Collar pubescent. Leaf-blades 15–30 cm long, 3–5 mm wide. Leaf-blade surface scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, obtuse.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–16 mm long, 1 length of upper glume, membranous, 1-keeled, 5 -veined. Lower glume apex acuminate or cuspidate. Upper glume lanceolate, 10–16 mm long, 1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume lateral veins absent or distinct. Upper glume apex emarginate, mucronate.

**Florets.** Fertile lemma lanceolate, subterete, 11–12 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea, without distinctive roughness or scabrous. Lemma apex acute, awned, 3-awned. Principal lemma awn flat below, with 22–36 mm long limb, without a column, persistent. Lateral lemma awns present, 17–31 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilary side, 7–8 mm long. Hilum linear, 0.25–0.33 length of caryopsis.


Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (307, Fig. 273).


Derivation (Clifford & Bostock 2007): L. *bis*, twice; *partia*, divide. Inflorescence branches regularly dividing into two.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms erect or geniculately ascending, 30–65 cm long, 1–3 -noded. Culm-internodes distally glabrous or pubescent. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blades curled, conduplicate, 5–20 cm long, 1–2 mm wide, stiff. Leaf-blade surface scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4–0.5 mm long, pilose, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6.5–8 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scaberulous. Lower glume lateral veins absent. Lower glume apex...
acuminate, mucronate. Upper glume lanceolate, 6–7 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins absent. Upper glume apex emarginate or acute, mucronate.

**Florets.** Fertile lemma elliptic, subterete, 5–6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 7–14 mm long limb, persistent. Lateral lemma awns present, 7–14 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG), Continent.** Africa.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State.** Caribbean. Cuba.


**Illustrations (Journals):** Austr. Syst. Bot. (5: 216, Fig.16 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–90 cm long, 3–5 -noded. Culm-internodes smooth, distally glabrous. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute, 11–20 cm long, 1–1.5 mm wide. Leaf-blade surface scaberulous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, effuse, 10–34 cm long, 4.5–7.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.8–1 mm long, pubescent, acute. Floret callus hairs 1–1.5 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–14 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex acute or acuminate, awned, 1 -awned, awn 1 mm long. Upper glume lanceolate, 9–15 mm long, 1.1 length of
adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate, awned, 1 -awned, awn 1 mm long.

Florets. Fertile lemma lanceolate, suberete, 8–12 mm long, coriaceous, pallid or light brown or purple, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculate, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 16–28 mm long limb, without a column, persistent. Lateral lemma awns present, 16–28 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp. Hilum linear, 0.5 length of caryopsis.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Bonin Islands, now known as Ogasawara-shot.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Culms 10–30 cm long, 0.3–0.6 mm diam., 1–2 -noded. Culm-internodes smooth. Leaves mostly basal. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades conduplicate, 5–12 cm long, 1–1.5 mm wide, stiff. Leaf-blade surface glabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.3–1.5 mm long, pubescent, acute.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–9 mm long, 0.66 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 9–12 mm long, 1.5–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma linear, suberete, 6–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3 -branched, with 40–60 mm long limb, with twisted column. Column of lemma awn 6–7 mm long. Lateral lemma awns present, 15–20 mm long, shorter than principal.

Flower and Fruit. Anthers 3.


Illustrations: None found.


**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending, 25–50 cm long, 3–4 -noded. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades 5–16 cm long, 1–1.7 mm wide. Leaf-blade surface ribbed, pubescent, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 8.5–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–7.5 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, obtuse, mucronate. Upper glume lanceolate, 8.5–10 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

**Florets.** Fertile lemma elliptic, suberete, 8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea.lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 10–15 mm long limb, persistent. Lateral lemma awns present, 10–15 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 65–120 cm long. Lateral branches lacking. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades curled (lower) or straight (upper), flat (lower) or convolute (upper), 25–50 cm long, 2.5–3.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antrosely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, 16–23 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets spiciform, suberete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 1 mm long, bearded, acute.


**Florets.** Fertile lemma suberete, 9–10 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface smooth, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 47–59 mm long limb, with twisted column. Column of lemma awn 23–29 mm long. Lateral lemma awns present, ascending, 40–53 mm long, shorter than principal.

**Distribution (TDWG).** Continent. South America.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending, 25–50 cm long, 3–4 -noded. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades 5–16 cm long, 1–1.7 mm wide. Leaf-blade surface ribbed, pubescent, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 8.5–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, hairy adaxially.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–7.5 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, obtuse, mucronate. Upper glume lanceolate, 8.5–10 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

**Florets.** Fertile lemma elliptic, suberete, 8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 10–15 mm long limb, persistent. Lateral lemma awns present, 10–15 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** South Tropical Africa. Zimbabwe.


**TYPE from Brazil.** T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Minas Gerais: ca. 12 km from Barco de Cocais, base of Serra do Carac|7a, 28 Jan 1971, H. S. Irwin et al. 29325 (HT: SP; IT: MO, NY, UB).

**Illustrations (Journals):** Novon (2: 37, Fig. 1 (1992)).

**Derivation (Clifford & Bostock 2007):** L. -ense, denoting origin. From Brazil.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 65–120 cm long. Lateral branches lacking. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades curled (lower) or straight (upper), flat (lower) or convolute (upper), 25–50 cm long, 2.5–3.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antrosely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, 16–23 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets spiciform, suberete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 1 mm long, bearded, acute.


**Florets.** Fertile lemma suberete, 9–10 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface smooth, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 47–59 mm long limb, with twisted column. Column of lemma awn 23–29 mm long. Lateral lemma awns present, ascending, 40–53 mm long, shorter than principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast, Brazil South.


**TYPE** from China. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: China: Xizang: mountain slopes, 3000–3100 m. (HT: ?).

**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 635).

**Derivation** (Clifford & Bostock 2007): L. *brevis*, short; -issima, most. Leaf-blades very short?.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–40 cm long, 0.5–1 mm diam., 1–2 -noded. Culm-nodes glabrous. Leaves mostly basal. Ligule a fringe of hairs. Leaf-blades involute, 5 cm long, 1–2 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, 10 cm long. Primary panicle branches 3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pilose, obtuse.

**Glumes.** Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–7 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuticuspitate. Upper glume lanceolate, 12 mm long, 1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

**Florets.** Fertile lemma elliptic, subterete, 10–12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn straight, with 2 mm long limb, persistent. Lateral lemma awns present, 0.4 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central, Tibet. Yunnan.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Guinea. *Basionym or Replaced Name: Aristida longiglora* var. *brevisubulata* Maire, *Contr.:*2600 (1938).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *brevis*, short; *subula*, awl; -ata, possessing. Glumes or lemma shortly awned.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual or perennial, short-lived, caespitose, clumped loosely. Culms erect or geniculately ascending, 30–60 cm long. Culm-internodes distally glabrous. Culm-nodes purple, glabrous. Lateral branches convolute, covering most of palea. Leaf-sheaths loose or inflated, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades involute, 3–20 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 5–15 cm long. Primary panicle branches 2–3 -nate, indistinct the panicle almost racemose or simple, bearing 1–2 fertile spikelets on each lower branch. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, pubescent, acute.
Glumes. Glumes dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume linear, 20 mm long, 3.3 length of adjacent fertile lemma, membranous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

Florets. Fertile lemma linear, subterete, 6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 50–55 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 12–25 mm long. Lateral lemma awns present, 50–55 mm long, subequal to principal. Palea 1.5 mm long, 0.25 length of lemma.

Flower and Fruit. Lodicules 2, oblong, 2 mm long, ciliate, hairy across the apex, truncate. Anthers 3, 3 mm long. Caryopsis with adherent pericarp, linear, 4 mm long. Embryo 0.25 length of caryopsis. Hilum linear, 1 length of caryopsis.


Country /Province /State. Northern Africa, Algeria.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): In honor of Nathaniel Lord and Elizabeth Gertrude Britton, United States botanists.


Habit, Vegetative Morphology. Perennial. Culms erect, robust, 60–100 cm long. Ligule a fringe of hairs. Leaf-blades involute, 15–30 cm long, 1–2.5 mm wide, stiff.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, pungent.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–10 mm long, 0.7–0.8 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 10–12 mm long, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma linear, subterete, 7 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck, with this appendage 1 mm long, awned, 3 -awned. Principal lemma awn spreading, with 15–20 mm long limb. Lateral lemma awns present, spreading as much as principal or gyrate, 15–20 mm long, subequal to principal.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.


Illustrations (Journals): Austr. Syst. Bot. (5: 211, Fig.15 (1992)).


Habit, Vegetative Morphology: Perennial, caespitose, clumped loosely. Culms 20–45 cm long, 3 -noded. Culm-internodes smooth, distally glabrous. Ligule a fringe of hairs, 0.4 mm long. Leaf-blades flexuous, 5–10 cm long. 1 mm wide.

Inflorescence: Inflorescence a panicle. Panicle contracted, linear, 8–17 cm long, 0.5–1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets: Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.6 mm long, pubescent, acute. Floret callus hairs 1.5 mm long.

Glumes: Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 9 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous or scabrous. Upper glume apex acute or acuminate.

Florets: Fertile lemma lanceolate, subterete, 8 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea, scabrous. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 13 mm long limb, without a column, persistent. Lateral lemma awns present, 11 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.


Eremean. Darwin & Gulf.


Illustrations (Journals): Austr. Syst. Bot. (5: 211, Fig.15 (1992)).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From the Burra Range, Queensland, Australia.


Habit, Vegetative Morphology: Perennial, caespitose. Culms 40–80 cm long, 1–3 -noded. Culm-internodes scaberulous, distally glabrous. Leaf-sheaths scaberulous. Ligule a fringe of hairs, 0.4 mm long. Leaf-blades filiform, involute, 7–14 cm long, 1 mm wide. Leaf-blade surface scaberulous, rough on both sides.


Fertile Spikelets: Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6.6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.6 mm long, pubescent, acute. Floret callus hairs 1.5 mm long.
Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6.6–8 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 6.5–8 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

Florets. Fertile lemma lanceolate, subterete, 6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn subterete below, with 10 mm long limb, without a column, persistent. Lateral lemma awns present, 10 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.


Country /Province /State. Australia. Queensland.
North, Inland.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, slender, 30–50 cm long, wiry, 2-noded. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades filiform or linear, flat or involute, 5–10 cm long, 0.5–1 mm wide. Leaf-blade surface puberulous, hairy adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 8–9 mm long, 0.8–0.9 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acumin. Upper glume linear, 10 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acumin.

Florets. Fertile lemma linear, subterete, 8–10 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 15–30 mm long limb. Lateral lemma awns present, gyrate, 15–30 mm long, subequal to principal.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.
Country /Province /State. Caribbean. Cuba, Dominican Republic.


**Derivation** (Clifford & Bostock 2007): L. - *ica*, belonging to. From California, USA.

**Classification**: Subfamily Aristidoideae. Tribe: Aristideae.


**Inflorescence**. Inflorescence a panicle. Panicle contracted, linear, 2–9 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose or simple. Spikelets solitary. Fertile spikelets sessile. Pedicels present.

**Fertile Spikelets**. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 10–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pubescent, pungent.

**Glumes**. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–8 mm long, 0.5 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 10–16 mm long, 2 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets**. Fertile lemma linear, suberete, 5–7 mm long, coriaceous, purple, without keel, 3 -veined, 0–3 -veined. Lemma surface asperulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 25–45 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 15–20 mm long. Lateral lemma awns present, spreading as much as principal, 25–45 mm long, subequal to principal.

**Flower and Fruit**. Anthers 3. 2n = 22.

**Distribution (TDWG)**. Continent. North America.

**Country /Province /State. Southwestern USA, Mexico**. California. Northwest Mexico. Baja California, Baja California Sur, Sonora.


**Illustrations (Journals)**: *Austr. Syst. Bot.* (5: 168, Fig.5 (1992)).


**Classification**: Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology**. Perennial, caespitose, clumped moderately or densely. Culms erect, 33–128 cm long. Culm-internodes mid-green or glaucous, smooth or scaberulous or papillose, distally glabrous. Lateral branches sparse. Leaf-sheaths smooth to antorse scabrous, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.3–1 mm long. Collar glabrous or pubescent. Leaf-blades filiform or linear, involute, 20–25 cm long, 1–4 mm wide. Leaf-blade surface smooth or scabrous, rough adaxially.
**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, linear to elliptic, 12–31 cm long, 2–20 cm wide. Primary panicle branches 2.5–6 cm long. Panicle branches with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5.5–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.5–14.8 mm long, 0.75–1.1 length of upper glume, membranous, 1-keeled, 1–7 -veined. Lower glume lateral veins absent or distinct. Lower glume surface smooth to scabrous. Upper glume apex acute or acuminate, muticosus or mucronate. Upper glume lanceolate, 5.5–20 mm long, 1.4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth to scabrous. Upper glume apex emarginate to acuminate, muticosus or mucronate.

**Florets.** Fertile lemma lanceolate, subterete, 4–14 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea, without distinctive roughness or scabrous. Lemma apex acute, awned, 3 -awned. Principal lemma awn flat below, with 10–31 mm long limb, without a column, persistent. Lateral lemma awns present, 8–27 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 3–5 mm long. Hilum linear, 0.3–0.5 length of caryopsis.

**Distribution (TDWG). Continent.** Australasia.

**Country /Province /State.** Australia. New South Wales, Northern Territory, Queensland, Victoria, Western Australia.

Eremean. Darwin & Gulf. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.


**Accepted by:** U. Quattrocchi, *CRC World Dictionary of Grasses* (2006).

**TYPE from Angola.** T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Angola, Huilla to Quihila Mission: Pearson 2634 (K holo).

**Illustrations:** None found.


**Derivation** (Clifford & Bostock 2007): L. *canesco*, grow white. Leaf-blades or leaf-sheaths densely invested with white or grey hairs.

**Classification.** Subfamily Aristidoideae, Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–100 cm long, 4 -noded. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades curled, 10–20 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins cartilaginous, scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, elliptic, interrupted, 10–20 cm long, with spikelets clustered towards branch tips. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, bearded, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.5–8 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex emarginate or obtuse, mucronate. Upper glume lanceolate, 8–11 mm long, 1–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate or truncate, mucronate.

**Florets.** Fertile lemma elliptic, subterete, 7–11 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness or scaberulous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 9–15 mm long limb,
persistent. Lateral lemma awns present, 7–13 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

\[2n = 48\] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa.


**Aristida capillacea** Lam. *Illustr.* 1: 156. (1791).


**Illustrations (Journals):** *Ruizia* (13:233, Fig 26a-b (1993)).

**Derivation** (Clifford & Bostock 2007): *L. capillis*, a hair, *-acea*, indicating resemblance. inflorescence with capillary branches.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms 11–24 cm long. Leaf-sheath oral hairs scanty or bearded (sparsely). Ligule a ciliolate membrane, 0.2 mm long. Collar glabrous. Leaf-blades straight, conduplicate, 2.1–6 cm long, 0.8–0.9 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antorse scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open (capilaceous branches), 6–10 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.2 mm long, pilose, obtuse.

**Glumes.** Glumes dissimilar (lower shorter than upper). Lower glume lanceolate, 2.5–3.5 mm long, 1 -veined. Lower glume primary vein scabrous. Lower glume surface scabrous, rough generally. Lower glume apex acute or acuminate, muticous. Upper glume lanceolate, 3.2–3.9 mm long, 1 -veined. Upper glume surface smooth. Upper glume apex entire, acute or acuminate.

**Florets.** Fertile lemma subterete, 2–3.6 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 7–8 mm long limb, with twisted column. Column of lemma awn 1–2 mm long. Lateral lemma awns present, ascending, 6–7 mm long, subequal to principal.

**Flower and Fruit.** \[2n = 22\].

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Mexico. Central Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica. Northern South America, Western South America, Brazil. Southern South America. Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North.


Illustrations (Journals): Austral. Syst. Bot. (5: 218, Fig.17 (1992)).


Derivation (Clifford & Bostock 2007): L. capillis, hair; folium, leaf. Leaf-blades hair-like.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 20–80 cm long, 2 mm diam., 3 -noded. Culm-internodes smooth, distally glabrous. Lateral branches ample. Leaf-sheaths longer than adjacent culm internode, smooth or scaberulous. Leaf-sheath oral hairs pubescent, 0.3–0.4 mm long. Ligule a fringe of hairs, 0.3–0.5 mm long. Collar glabrous. Leaf-blades filiform, involute, 3–10 cm long, 0.5–1 mm wide. Leaf-blade surface scabrous, rough on both sides.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 6–25 cm long, 0.5–2 cm wide. Primary panicle branches 0.5–1 cm long. Panicle axis pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subereterete, 3.5–8.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.6–1 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.6–8 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scabrous. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume lanceolate, 5.3–8.5 mm long, 1–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth or scabrous. Upper glume lateral veins absent. Upper glume apex emarginate or obtuse, muticous or mucronate.

Florets. Fertile lemma lanceolate, subereterete, 6.4–7.4 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn curved, spreading, flat below, with 8–16 mm long limb, without a column, persistent. Lateral lemma awns present, spreading as much as principal, 8–14 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, 4–5.8 mm long. Hilum linear, 0.5–0.7 length of caryopsis.


Illustrations (Journals): Austral. Syst. Bot. (5: 197, Fig.11 (1992)).

**Derivation** (Clifford & Bostock 2007): L. *caput*, head; Medusa, monster with snakes for hair. Inflorescence a spike-like panicle and the spikelets with long trifid, twisted awns.

**Classification**. Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology**. Perennial, caespitose. Culms 33–85 cm long. Culm-internodes smooth or scaberulous, distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs lacking or ciliate, 0.5–2.5 mm long. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute, 2–4 cm long, 0.5–1 mm wide. Leaf-blade surface scabrous, rough adaxially or on both sides.

**Inflorescence**. Inflorescence a spike-like panicle. Spikelets with long trifid, twisted awns. Primary panicle branches 4–8 cm long, bearing spikelets almost to the base. Panicle branches scaberulous or scabrous, with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets**. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–9.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.8–1.1 mm long, pubescent, acute.

**Glumes**. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2.7–5 mm long, 0.66 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex obtuse to acuminate. Upper glume lanceolate, 4–8 mm long, 0.66–0.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth to scabrous. Upper glume apex obtuse to acuminate.

**Florets**. Fertile lemma lanceolate, subterete, 6–9.5 mm long, coriaceous, pallid or light brown, concolorous or mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scabrous, rough generally. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn spreading, flat below, with 7–13 mm long limb, without a column, persistent. Lateral lemma awns present, spreading as much as principal, 6–12 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit**. Anthers 3, 1.3 mm long. Caryopsis with adherent pericarp, 4–6.1 mm long. Hilum linear, 0.4 length of caryopsis.

**Distribution (TDWG). Continent**. Australasia.

**Country /Province /State**. Australia. Northern Territory, Queensland. North, Central, South East, Inland. Western Slopes, Western Plains.


**Illustrations**: None found.

**Derivation** (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Serra da Chapada, Brazil.

**Classification**. Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology**. Perennial. Culms 90–106 cm long. Lateral branches lacking. Leaf-sheath oral hairs scanty or bearded (sparsely). Ligule a ciliolate membrane, 0.2 mm long. Collar glabrous. Leaf-blades straight, flat or convolute (sometimes upper), 20–50(–60) cm long, 4–7 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence**. Inflorescence a spike-like panicle. Panicle open, 30–40 cm long.

**Fertile Spikelets**. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 1.5–1.8 mm long, bearded, acute.

**Florets.** Fertile lemma subterete, 8–10 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above, with a median groove (ventral, longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with (35–)45–56 mm long limb, with twisted column. Column of lemma awn (13–)16–25 mm long. Lateral lemma awns present, ascending, 28–46 mm long, shorter than principal.

**Distribution (TDWG).** Continent: South America.
**Country /Province /State.** Brazil. Brazil West Central, Brazil Northeast, Brazil North. Mato Grosso. Bahia. Pará.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Mary Agnes Merrill Chase (1869–1963) United States agrostologist.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms geniculately ascending, 50–60 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades involute, 10–15 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially, pilose, sparsely hairy, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 11–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, pubescent, pungent.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 10–13 mm long, 1 length of upper glume, membranous, 2 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate or setaceously acuminate. Upper glume linear, 10–13 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acuminate or setaceously acuminate.

**Florets.** Fertile lemma linear, subterete, 11 mm long, coriaceous, light brown or purple, mottled with last colour, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 20 mm long limb. Lateral lemma awns present, spreading less than principal, 20 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: South America.
**Country /Province /State.** Caribbean. Puerto Rico.


Illustrations: None found.


Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 10–15 cm long. Lateral branches ample, arising from lower culm. Leaf-sheaths 1–2 cm long. Ligule a fringe of hairs. Leaf-blades filiform, involute, 2–4 cm long, 1 mm wide. Leaf-blade apex acute.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 14–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pubescent, acute.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 8–10 mm long, 0.66 length of upper glume, membranous. Lower glume apex acute. Upper glume linear, 14–15 mm long, 3–4 length of adjacent fertile lemma, membranous. Upper glume apex dentate, 2 -fid.

Florets. Fertile lemma linear, subterete, 3.5–4.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 27–40 mm long limb, with twisted column, limb scabrous. Column of lemma awn 4.5–6 mm long. Lateral lemma awns present, subequal to principal. Palea 1.3 mm long, 0.33 length of lemma.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.
Country /Province /State. Western South America. Peru.


Illustrations (Books): C-C Hsu, Flora of Taiwan, Vol 5 (1978) (290), C-C Hsu,Taiwan Grasses (1975) (425, Pl. 1385), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 633).


Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 30–60 cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades curved, involute, 10–15 cm long, 0.5–1 mm wide. Leaf-blade surface glabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.7 mm long, pubescent, obtuse.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–11 mm long, 1.2–1.3 length of upper glume, membranous, 1-keeled. Lower glume primary vein scaberulous. Lower glume apex setaceously acuminate. Upper glume lanceolate, 8–9 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear, subterete, 7.5–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 15–20 mm long limb, without a column. Lateral lemma awns present, 10–15 mm long, shorter than principal, lemma awns 0.66 length of principal.

Flower and Fruit. Anthers 3.

Fujian, Guangdong, Guangxi.


Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, Flora Argentina 3 – 1, Aristidoideae a Pharoidae (2012) (31), S.A.Renvoize, Gramineas de Bolivia (1998) (283, Fig. 57), L.B. Smith, D.C. Wasshausen, R.M. Klein Flora Ilustrada Catarinensis Gramineas (1981–1982) (507, Fig. 108), A.Burkat, Flora Ilustrada de Entre Rios (Argentina), Pt II, Gramineas (1969) (222, Fig. 83 & 223, Fig. 84 as A. leptochaeta & A. aristiglumis), B.Rosengurtt, Gramineas Uruguayas (1970) (208, Fig. 85).

Illustrations (Journals): Darwiniana (41: 169, fig.5 (2003)).

Derivation (Clifford & Bostock 2007): L. related. Similar to another species.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 40–70 cm long. Ligule a fringe of hairs. Leaf-blades flat or involute, 10–20 cm long, 2–3 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 7–9 mm long, 1 length of upper glume, membranous. Lower glume apex acute, muticous or mucronate. Upper glume linear, 7–9 mm long, 1.1 length of adjacent fertile lemma, membranous. Upper glume apex acute, muticous or mucronate.

Florets. Fertile lemma linear, subterete, 6.5–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 15–25 mm long limb. Lateral lemma awns present, subequal to principal.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil, Southern South America. Venezuela. Bolivia, Peru. Brazil West Central, Brazil South. Argentina Northwest, Argentina Northeast, Paraguay, Uruguay.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. related. Similar to another species.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms geniculately ascending, 20–40 cm long. Lateral branches sparse, arising from lower culm. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking or ciliate. Ligule a fringe of hairs. Leaf-blades involute, 5–15 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially, pilose, sparsely hairy, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5 mm long, pubescent, acute.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 4–5 mm long, 0.7–0.8 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume linear, 5–7 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 6–7 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck, with this appendage 1 mm long, awned, 3 -awned. Principal lemma awn 3-branched, with 10–15 mm long limb. Lateral lemma awns present, spreading less than principal, 10–15 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean, Northern South America. Leeward Is, Windward Islands. Venezuela.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 100–150 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs. Leaf-blades flat, 15–30 cm long, 2–3 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear or lanceolate, dense, 15–30 cm long. Primary panicle branches ascending, 5–10 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, pungent.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 8–9 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate or setaceously acuminate. Upper glume linear, 8–9 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent.

**Florets.** Fertile lemma linear, subterete, 8 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck, with this appendage 1 mm long, awned, 3 -awned. Principal lemma awn 3-branched, ascending or spreading, with 10–15 mm long limb. Lateral lemma awns present, spreading as much as principal or gyrate, 10–15 mm long, subequal to principal.
**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: North America.

**Country /Province /State.** Southeastern USA. Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina.

**Aristida condylifolia** Caro. *Darwiniana* 14 :391 (1967).


**Derivation** (Clifford & Bostock 2007): Gk. kondylus, knuckle; L. folium, leaf. Leaf-blade abruptly bent at the junction with sheath.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 20–40(–50) cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades curved or straight, conduplicate, 6–16 cm long, 0.2–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, 12–18 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.5–0.8 mm long, pilose, obtuse or acute (subacute).


**Florets.** Fertile lemma laterally compressed or subterete, 10–13(–15) mm long, without keel, rounded except near apex, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma surface scaberulous, rough above, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma aawn straight, ascending. simple at base, with 50–80 mm long limb, without a column. Lateral lemma awns present, ascending, 50–80 mm long, subequal to principal.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Brazil, Southern South America. Argentina Northeast, Paraguay. Entre Rios.

**Aristida congesta** Roem.& Schult. Syst. 2: 401. (1817).


**Type** from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: Lichtenstein s.n., South Africa: Cape Province: West Griqualand (B (destroyed)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
Habit, Vegetative Morphology. Perennial, caespitose. Culms 10–75 cm long. Culm-internodes distally glabrous. Leaf-sheath oral hairs lacking or bearded. Ligule a fringe of hairs. Leaf-blades conduplicate or convolute, 2–20 cm long, 1–2 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 6.5–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pilose, truncate.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–5 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute, awned, 1 -awned, awn 2 mm long. Upper glume lanceolate, 6.5–10 mm long, 1.6–2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume awned, 1 -awned, awn 2 mm long.

Florets. Fertile lemma lanceolate, suberete, 4–5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 12–30 mm long limb, with twisted column, deciduous, abscissing from top of column, limb scabrous. Column of lemma awn 2–4 mm long. Lateral lemma awns present, 12–30 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.

2n = 22, or 44.


Region. Northern Europe (*).


Illustrations (Journals): Novon (2: 38, Fig. 2 (1992)).


Habit, Vegetative Morphology. Perennial. Culms 24–26 cm long. Lateral branches lacking. Leaf-sheath oral hairs sparsely bearded. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades curled (lower) or straight (upper), flat (lower) or convolute (upper), 10–33 cm long, 2–3.5 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex acute, antrorsely scabrous.

Inflorescence. Inflorescence a panicle. Panicle spiciform, 10–15 cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets suberete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 1–1.3 mm long, bearded, acute.

Florets. Fertile lemma subterete, 7–9 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, pseudo-articulate at base (of column), with 32–40 mm long limb, with twisted column. Column of lemma awn 10–15 mm long. Lateral lemma awns present, ascending, 26–32 mm long, shorter than principal.

Distribution (TDWG). Continent. South America.


Illustrations (Journals): Austr. Syst. Bot. (5: 157, Fig.3 (1992)).


Habit, Vegetative Morphology. Annual or perennial, short-lived, caespitose. Culms erect or geniculately ascending, zigzag, 12–44 cm long, 2–4 -noded. Culm-internodes antrorsely scabrous, distally glabrous. Lateral branches ample. Leaf-sheaths smooth or scaberulous, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate, 3 mm long. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades flexuous, filiform, involute, 3–10 cm long, 1 mm wide. Leaf-blade surface smooth or scaberulous, glabrous or pilose, hairy adaxially.

Inflorescence. Inflorescence a panicule. Panicle open, elliptic, 9–26 cm long, 4–9 cm wide. Primary panicle branches 2–3 -nate, 1–2.5 cm long. Panicle branches scaberulous or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, compressed slightly, 12–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–2 mm long, pubescent, pungent. Floret callus hairs 0.1–0.3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7.4–14.2 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 12–30 mm long, 2.5–4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous or scabrous. Upper glume apex emarginate or acute or acuminate, muticous.

Florets. Fertile lemma lanceolate, laterally compressed, 4.9–7 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 18–95 mm long limb, with twisted column, deciduous, abscessing from top of lemma. Column of lemma awn 7–26 mm long. Lateral lemma awns present, spreading as much as principal, 16–92 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3, 1.3 mm long. Caryopsis with adherent pericarp, 3–4.5 mm long. Hilum linear, 0.5–0.6 length of caryopsis.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). Australia. New South Wales, Northern Territory, Queensland, South Australia, Victoria, Western Australia.

Kimberley, Eremean, South-West. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern. North, Central, South East, Inland. Western Slopes, Western Plains.


**Illustrations (Journals):** *Systematic Botany* (15: 42, Fig.1 (1990)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 8–10 -noded. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs bearded, 4 mm long. Ligule a fringe of hairs, 0.2–0.4 mm long. Leaf-blades erect, curved, plicate, 10–22 cm long, 0.4–1 mm wide. Leafblade surface woolly, hairy abaxially (proximally). Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle, comprising 2–20 fertile spikelets. Panicle open, linear, 3–20 cm long, bearing few spikelets. Primary panicle branches appressed, indistinct the panicle almost racemose, bearing 2–3 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–8.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7.4–9.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.7–0.9 mm long, pubescent, acute.

**Glumes.** Glumes similar, with lower wider than upper, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 5–9 mm long, 0.7–0.9 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume linear, 7.4–9.7 mm long, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate, mucronate.

**Florets.** Fertile lemma linear, subterete, 5–6 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 7.5–10 mm long limb. Lateral lemma awns present, 7.5–10 mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Turks-Caicos Is.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).


**Illustrations:** None found.

**Images:** H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, robust, 80–120 cm long. Leaf-sheaths 9–20 cm long. Ligule a fringe of hairs. Leaf-blades 35–50 cm long, 6 mm wide. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, pyramidal, 30–40 cm long. Primary panicle branches ascending or spreading, whorled at most nodes, 8–15 cm long. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9 mm long, 0.9 length of upper glume, scarios, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1 -awned, awn 1–2.5 mm long. Upper glume lanceolate, 10–11 mm long, 1–1.2 length of adjacent fertile lemma, scarios, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 2.5 mm long.

**Florets.** Fertile lemma elliptic, subterete, 10–13 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 39 mm long limb, with a straight or slightly twisted column, persistent. Column of lemma awn 3 mm long. Lateral lemma awns present, 33 mm long, subequal to principal or shorter than principal. Palea 1.3 mm long, 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3, 4 mm long.

**Distribution (TDWG), Continent.** Tropical Asia.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 192, Fig.10 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, culms solitary or caespitose. Culms 8–30 cm long. Culm-internodes distally glabrous. Leaves cauline. Ligule a fringe of hairs. Leaf-blades 2–7 cm long, 0.5–1 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pilose, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1.5–2 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume lanceolate, 2–2.5 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, mucronate.
**Florets.** Fertile lemma elliptic, subterete, 1.5–1.7 mm long, coriaceous, without keel, 0–3 -veined. Lemma surface scaberulous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 4.5–6 mm long limb, persistent. Lateral lemma awns present, 2.5–4 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa, Temperate Asia, Tropical Asia, Australasia, South America.


**Illustrations (Books):** A.S. Hitchcock, Manual of the Grasses of the West Indies (1936) (95, Fig. 55).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Culms erect, 20–60 cm long, wiry. Leaf-sheaths 0.5–1 cm long, glabrous on surface. Leaf-sheath oral hairs scanty or ciliate. Ligule a fringe of hairs. Leaf-blades spreading, flat or involute, 0.5–2 cm long, 0.5–1 mm wide, coriaceous, stiff. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 5–10 cm long. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 8–9 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume linear, 8–9 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading, with 10–12 mm long limb. Lateral lemma awns present, spreading less than principal, 10–12 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.


Accepted by: W.D. Clayton & K. Harman, GrassBase (2008) and online.


**Illustrations:** None found.


Habit, Vegetative Morphology. Annual. Culms 30–40 cm long. Culm-internodes scabrous. Lateral branches sparse. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades flat or involute, 4–10 cm long, 0.5–1 mm wide. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle, terminal or terminal and axillary. Panicle contracted, linear, 5–10 cm long. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets sessile and pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 5–7 mm long, 0.5–0.66 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, mucronate. Upper glume linear, 10 mm long, 1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate, mucronate.

Florets. Fertile lemma linear, subterete, 10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading or briefly coiled at base of limb, with 10 mm long limb. Lateral lemma awns present, spreading less than principal, 2–4 mm long, shorter than principal.

Flower and Fruit. Anthers 3.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


IST: W.F. Karwinski von Karwin 1007, Jul 1842, Mexico: inter La Noria del Viejo et Tanquecillos (LE, US-80991 (fragm. ex LE & photo)).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. curvus, bent; folium, leaf. The leaf-blades are convolute.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, pungent.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8 mm long, 0.7–0.8 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex emarginate or obtuse, mucronate. Upper glume lanceolate, 10–11 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex emarginate or obtuse, mucronate.

Florets. Fertile lemma linear, subterete, 10 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex scabrous, awned, 3 -awned. Principal lemma awn
spreading, with 10–15 mm long limb. Lateral lemma awns present, spreading as much as principal, 10–15 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

2n = 22 (1 ref TROPICOS), or 44 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America.


**TYPE** from Nepal. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: IT: Royle 64, Nepal (LE).

**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, robust, 100–200 cm long. Ligule a fringe of hairs. Leaf-blades flat or involute, 15–35 cm long, 3–5 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.7–1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–12 mm long, 0.75–0.8 length of upper glume, scarious, purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1 -awned. Upper glume lanceolate, 10–15 mm long, 1.2–1.5 length of adjacent fertile lemma, scarious, purple, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 3–5 mm long.

**Florets.** Fertile lemma elliptic, subterete, 8–10 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 35–55 mm long limb, persistent. Lateral lemma awns present, 25–45 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose, truncate or obtuse.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 8 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent.

Florets. Fertile lemma elliptic, subterete, 8 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 25 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 5 mm long. Lateral lemma awns present, 20 mm long, shorter than principal. Palea without keels.

Flower and Fruit. Anthers 3.


Country /Province /State. Southern Africa. Northern Cape, Western Cape.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.


Inflorescence. Inflorescence a panicle, comprising 4–6 fertile spikelets. Panicle open, lanceolate, 3–6 cm long, bearing few spikelets. Primary panicle branches appressed, 0.8–0.9 cm long, bearing 1–2 fertile spikelets on each lower branch. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1–6 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, subterete, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent, acute.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 2.5–3 mm long, 0.66–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Upper glume linear, 3.5–4.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma linear, subterete, 3.5–4 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 1 -awned. Principal lemma awn curved, with 20 mm long limb.


Country /Province /State. Western Indian Ocean. Madagascar.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

1161, 30 Oct, Am Kalungwisi-river, zwischen dem Bangweolo- und Tanganyika-See, auf feuchter Wiese (S).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. lacking in hairs. Foliage of spikelets glabrous or weakly hairy.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 10–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, bearded, truncate or obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–8.5 mm long, 0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 10–11 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, suberete, 6.5–7.5 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above or in lines. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, reflexed, with 30–35 mm long limb, persistent. Lateral lemma awns present, spreading less than principal, 25–30 mm long, shorter than principal. Palea 0.3 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Aristida depressa Retz. Obs. 4: 22 (1786).


TYPE from India. T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database: HT: Kunig s.n., India: in sterilioribus Malabariae (S; IT: B-W, M).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. broad and dwarf the growth having taken place horizontally. With spreading geniculate culms.


Derivation (Clifford & Bostock 2007): Gk. desmos, anything used for tying; anthos, flower. The three arms of the awn intertwine at maturity.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 45–100 cm long, wiry. Lateral branches ample. Leaf-sheaths without keel, glabrous on surface or pubescent or pilose or woolly. Ligule a fringe of hairs, 0.2–0.3 mm long. Leaf-blades flat or involute, 25–40 cm long, 2–4.5 mm wide. Leaf-blade surface scabrous, rough adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 10–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, pubescent, pungent.


Florets. Fertile lemma linear, laterally compressed, 7–10 mm long, coriaceous, yellow or purple, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, recurved at base of limb, with 20–35 mm long limb, with a straight or slightly twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 1–2 mm long. Lateral lemma awns present, gyrate, 20–35 mm long, subequal to principal.

Flower and Fruit. Anthers 3.


Country /Province /State. North-central USA, South-central USA, Southeastern USA. Illinois, Kansas, Oklahoma, Texas, Louisiana.


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 10–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pilose, 2-toothed.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume oblong, 3.5–4 mm long, 0.3–0.4 length of upper glume, membranous, yellow or black (at tip), 1 -keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 10–11 mm long, 1.5 length of adjacent fertile lemma, membranous, yellow or black (at tip), 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma elliptic, suberete, 7–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 35 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 1.3–1.4 mm long. Lateral lemma awns present, 25 mm long, shorter than principal. Palea oblong, 0.7 mm long, 0.1 length of lemma, hyaline, 0 -veined, without keels.
Flower and Fruit. Lodicules 2, ovate, 1–1.25 mm long, veined, obtuse. Anthers 3, 3 mm long, yellow. Caryopsis with adherent pericarp, linear, 3–3.5 mm long. Hilum linear, 1 length of caryopsis.


**Type** from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: Michaux s.n., USA: South Carolina: in Carolina septentrionali juxta Lincoln (P; IT: C, P, US-81058 (fragm. ex P)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms zigzag, 15–75 cm long, wiry. Lateral branches ample, arising from mid culm or upper culm. Leaf-sheaths without keel, glabrous on surface. Ligule a fringe of hairs, 0.2–0.3 mm long. Leaf-blades filiform, 8–15 cm long, 1–2 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 4–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–10 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute or setaceously acuminate. Upper glume lanceolate, 4–10 mm long, 1–1.6 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or setaceously acuminate.

**Florets.** Fertile lemma linear, subterete, 4–6 mm long, coriaceous, yellow or purple, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading or briefly coiled at base of limb, with 5–9 mm long limb, without a column. Lateral lemma awns present, spreading less than principal, 1–2 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.


**Type** from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: South Africa, Cape: Coll? (LE holo).

**Illustrations (Books):** L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (Plt. 81 as var. *burkei*).


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous or woolly. Culms erect, 40–75 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades curled, filiform, involute, 10–30 cm long, 2.5–3 mm wide. Leaf-blade surface scaberulous, rough adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 10–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pilose, 2-toothed.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–9 mm long, 0.4–0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 10–17 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate.

Florets. Fertile lemma elliptic, suberete, 9–13 mm long, coriaceous, without keel, 3 -veined, 0–3 - veined. Lemma surface smooth or asperulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 20–30 mm long limb, with a straight or slightly twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 2–6 mm long. Lateral lemma awns present, 20–30 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. diminuo, make less. Awn apparently single due to non development of the lateral arms.


Habit, Vegetative Morphology. Annual, caespitose. Culms 15–30 cm long. Culm-internodes distally glabrous. Leaves cauline. Ligule a fringe of hairs. Leaf-blades 2–7 cm long, 0.5–1 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pilose, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2–2.5 mm long, 0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute, muticous or mucronate. Upper glume lanceolate, 2.5–3 mm long, 1.7–1.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, muticous or mucronate.

Florets. Fertile lemma elliptic, suberete, 1.5–1.7 mm long, coriaceous, without keel, 3 -veined, 0–3 - veined. Lemma surface scaberulous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 1 -awned. Principal lemma awn curved, 7–10 mm long overall. Palea 0.1 length of lemma, without keels.


*Aristida divaricata* Jacq., non Willd. (1809). *Eclog.* 7. t. 6 (1813).


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 25–70 cm long, wiry. Leaf-sheaths without keel. Leaf-sheath oral hairs pubescent or ciliate. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blades conduplicate, 6–20 cm long, 1–3 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pubescent, hairy axially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pilose, obtuse.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–13 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 8–13 mm long, 1.6–1.8 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma linear, subterete, 5–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 10–15 mm long limb, with twisted column. Column of lemma awn 2–5 mm long. Lateral lemma awns present, 10–15 mm long, subequal to principal.

Flower and Fruit. Anthers 3.

2n = 22 (1 ref TROPICOS).


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. divello, tear apart. Panicles or racemes interrupted.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–80 cm long, 3–4 -noded. Culm-internodes terete, smooth or scaberulous. Culm-nodes swollen. Lateral branches lacking or sparse, arising from mid culm. Leaf-sheaths mostly shorter than adjacent culm internode, smooth or scaberulous, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades flat or convolute, 10–30 cm long, 1–2.5 mm wide. Leaf-blade surface pubescent, hairy adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose, obtuse.


Florets. Fertile lemma oblong, suberete, 3 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 12 mm long limb, with twisted column, deciduous, abscissing from top of column. Column of lemma awn 1.5–3 mm long. Lateral lemma awns present, 12 mm long, subequal to principal.

Distribution (TDWG). Continent. South America.

Country/Province/State. Western South America. Galapagos.


Illustrations (Journals): Austr. Syst. Bot. (5: 155, Fig.2 (1992)).


Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 15–50 cm long. Culm-internodes smooth, distally glabrous. Lateral branches lacking or sparse. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate, 3 mm long. Ligule a fringe of hairs, 0.3–1 mm long. Leaf-blades flexuous, filiform, involute, 8–16 cm long, 0.5 mm wide. Leaf-blade surface scaberulous or scabrous, rough abaxially, glabrous or pilose, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear, 12–17 cm long, 1.2 cm wide. Primary panicle branches 2 -nate, 2–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, compressed slightly, 17–21 mm
long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pubescent, pungent. Floret callus hairs 0.2–1 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–10 mm long, 0.4–0.5 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface smooth to scabrous. Lower glume apex emarginate or obtuse, awned, 1 -awned, awn 1–2 mm long. Upper glume lanceolate, 17–21 mm long, 2.3–3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate or obtuse, awned, 1 -awned, awn 1–2 mm long.

**Florets.** Fertile lemma lanceolate, laterally compressed, 5.1–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 38–64 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 10–23 mm long, pubescent. Lateral lemma awns present, 20–41 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 4.5–5.5 mm long. Hilum linear, 0.75 length of caryopsis.


**Illustrations (Journals):** Austr. Syst. Bot. (5: 197, Fig.11 (1992)).

**Derivation** (Clifford & Bostock 2007): L. spiny. Inflorescence a very condensed panicle and the spikelets or auxiliary structures are awned the whole thereby resemble a hedgehog.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms robust, 50–120 cm long. Culm-internodes smooth, distally glabrous. Lateral branches ample. Leaf-sheaths antrorsely scabrous, glabrous on surface. Leaf-sheath oral hairs lacking or ciliate. Ligule a fringe of hairs, 0.5 mm long. Collar glabrous or pubescent. Leaf-blades involute, 6–12 cm long, 1–2.5 mm wide. Leaf-blade surface scabrous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 5–10 cm long, 0.8–2 cm wide. Primary panicle branches 0.5–1.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6.3–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–10 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 4–10 mm long, 0.6–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface scabrous. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 6.3–10 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculate, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 11–19 mm long limb, without a column, persistent. Lateral lemma awns present, 11–19 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.


**Illustrations (Books):** B.Rosengurtt, *Gramineas UruguayasI* (1970) (208, Fig. 85).

**Derivation** (Clifford & Bostock 2007): L. *echinus*, hedgehog; -ulus, diminutive; -ata, possessing. Leaf-blades hispid with small prickles.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 23–25 cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.2–0.4 mm long. Collar glabrous. Leaf-blades curved, conduplicate, 3.5–13 cm long, 1.3–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted (subcontracted), 10–15 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 1 mm long, pilose, acute.


**Florets.** Fertile lemma subterete, 12–14 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface papillose or tuberculate (strongly), rough generally or above, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 55–80 mm long limb, without a column. Lateral lemma awns present, ascending, 50–72 mm long, shorter than principal.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Brazil, Southern South America. Brazil South. Uruguay.


**Illustrations (Books):** G.Harling & C.Persson, *Flora of Ecuador* (2006) (57: 45, Fig. 8 (1997)).

**Derivation** (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Ecuador.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–70 cm long. Ligule a fringe of hairs. Leaf-blades 10–20 cm long, 2–3 mm wide.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

**Glumes.** Glumes similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 5–5.5 mm long, 0.75 length of upper glume, membranous. Lower glume apex acute. Upper glume linear, 6–7 mm long, 1–1.1 length of adjacent fertile lemma, membranous. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 5–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma awned, 3 -awned. Principal lemma awn with 8–11 mm long limb. Lateral lemma awns present, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country/Province/State.** Western South America. Bolivia, Ecuador, Peru.

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**Illustrations (Books):** M.A.N.Muller, Grasses of South West Africa/Namibia (1984).

**Derivation** (Clifford & Bostock 2007): L. spread out. Inflorescence an open panicle.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–11.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, obtuse.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 6–8.5 mm long, 0.66–1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface scabrous, rough above. Lower glume apex acute or acuminate. Upper glume lanceolate, 5.5–8 mm long, 0.66 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex truncate or obtuse.

**Florets.** Fertile lemma linear, subterete, 9–11.5 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 16 mm long limb, persistent. Lateral lemma awns present, 13 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, linear.

**Distribution (TDWG).** Continent. Africa.

**Country/Province/State.** Southern Africa. Namibia, Botswana, Limpopo, North-West, Gauteng.

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**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Heinrich Franz Alexander Eggers (1844–1908) German-born Danish military officer and plant collector in the West Indies and South America.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
**Habit, Vegetative Morphology.** Perennial, caespitose. Culms geniculately ascending or decumbent, 20–40 cm long, wiry. Leaf-sheaths smooth or scaberulous, glabrous on surface. Ligule a fringe of hairs. Collar pilose. Leaf-blades curved or flexuous, filiform, involute, 5–10 cm long, 0.5 mm wide. Leaf-blade surface scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 5–6 mm long, 0.5 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume linear, 10–12 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute, mucronate.

**Florets.** Fertile lemma linear, subterete, 10 mm long, coriaceous, 3 -awned, 0–3 -awned. Lemma surface scabrous, rough above.Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading, with 20–25 mm long limb. Lateral lemma awns present, spreading less than principal, 20–25 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Cuba, Dominican Republic.


Illustrations: None found.


**Habit, Vegetative Morphology.** Perennial. Culms (58–)70–85(–115) cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking or bearded. Ligule a ciliolate membrane, 0.2 mm long. Collar glabrous. Leaf-blades curled (lower) or straight (upper), flat (lower) or conduplicate (upper), (7–)11–34 cm long, 1.8–3.6 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, hairless except near base, moderately hairy, hairy adaxially. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, 15–33 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.8 mm long or -1.2 mm long, bearded, acute.

**Glumes.** Glumes persistent, dissimilar (lower longer, shorter or subequal upper). Lower glume lanceolate, 9.8–14.2 mm long, 1 -veined. Lower glume primary vein scabrous. Lower glume surface asperulous, rough generally. Lower glume apex setaceously acuminate. Upper glume lanceolate, 8.5–14 mm long, 1 -veined. Upper glume surface smooth. Upper glume apex entire or dentate, 2 -fid, setaceously acuminate.

**Florets.** Fertile lemma subterete, 6–7 mm long, without keel, rounded throughout, 3 -awned, 0–3 -awned. Lemma surface smooth, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with (14–)15–22(–30) mm long limb, with twisted column. Column of lemma awn (5–)8–12 mm long. Lateral lemma awns present, ascending, 13–20(–25) mm long, shorter than principal.

**Distribution (TDWG).** Continent. South America.


**TYPE** from Brazil. *Basionym or Replaced Name: Chaetaria elliptica Nees. Agrost. Bras. 389 (1829).*


**Illustrations (Books):** S.A.Renvoize, The Grasses of Bahia, 1984 (55, Fig. 19).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 20–25(–50) cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.6–0.8 mm long. Collar glabrous. Leaf-blades straight, conduplicate (commonly) or flat, 6–14 cm long, 1.8–2 mm wide. Leaf-blade surface scabrous, rough on both sides, glabrous or pilose, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle capititate, 2.5–4 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight, 0.2 mm long, pilose, obtuse.

**Glumes.** Glumes persistent, dissimilar (lower longer than upper sometimes subequal). Lower glume lanceolate, 7.5–9.2 mm long, 1 -veined. Lower glume primary vein scabrous. Lower glume surface scabrous (densely), rough generally. Lower glume apex acute (shortly awned), muticus or mucronate. Upper glume lanceolate, 7–9 mm long, 1 -veined. Upper glume surface asperulous. Upper glume apex entire, acute (shortly awned).

**Florets.** Fertile lemma subterete, 4–5.5 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined (densely). Lemma surface scabrous, rough above, without grooves. Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 7–14 mm long limb, without a column. Lateral lemma awns present, ascending, 5.5–12 mm long, shorter than principal.

**Distribution (TDWG).** Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.


**TYPE** from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Coahuila: San Lorenzo Canyon, ca. 8 km S of Saltillo, mountain scrub grassland vegetation with Berberis, Bouteloua, Hilaria, Saylirion, very rocky sandy loam, flat bajada on N-facing side of canyon, 6000 ft (1830 m), 3 Sep 1991, J. Valdis-Reyna 2254 (HT: ANSM; IT: NMSU).

**Illustrations (Journals):** Novon (5:213, Fig.3 (1995)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 35–80 cm long. Culm-internodes terete, distally glabrous. Lateral branches lacking. Leaves basal and cauline. Leaf-sheaths longer than adjacent culm internode, without keel, smooth or scaberulous, glabrous on surface. Ligule a fringe of hairs, 0.2–0.3 mm long. Leaf-blades flat or conduplicate, 15–35 cm long, 1–1.5 mm wide. Leaf-blade surface smooth or scaberulous, rough abaxially, glabrous or puberulous, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 10–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3–1 mm long, pubescent.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–13 mm long, 1 length of upper glume, membranous, light brown, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex acute. Upper glume lanceolate, 8–13 mm long, 1–1.3 length of adjacent fertile lemma, membranous, light brown, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, suberete, 6–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned or 3 -awned. Principal lemma awn geniculate or 3-branched, with 5–10 mm long limb, with twisted column. Column of lemma awn (3–)4–5 mm long. Lateral lemma awns absent or present, 0.1–3 mm long, shorter than principal. Palea 1 mm long, hyaline, 2-keeled.

**Flower and Fruit.** Lodicules 2, 1–1.5 mm long. Anthers 3, 2–2.5 mm long. Caryopsis with adherent pericarp, fusiform, 6 mm long, dark brown.

**Distribution (TDWG).** Continent. North America.

Country /Province /State. Mexico. Northeast Mexico, Southwest Mexico.

Coahuila, Chihuahua, Durango, Guanajuato, Nuevo Leon, Queretaro, San Luis Potosi. Oaxaca.

**Aristida engleri** Mez. Fedde, Repert. 17:147 (1889).


**TYPE** from Namibia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: H.G.A. Engler 6717, 4 May 1913, Namibia: Namabezirk, Kuibis-Steinsteppe, 1300 m (B; IT: US-81051 (fragm. ex B)).

**Illustrations (Books):** M.A.N.Muller, Grasses of South West Africa/Namibia (1984) (as var. engleri & var. ramosissima).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms geniculately ascending or decumbent, 35–50 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs. Leaf-blades flat or involute, 7–15 cm long, 1–2 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, lanceolate or ovate, 10–30 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 9–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, 2-toothed.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–6 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex obtuse. Upper glume lanceolate, 9–10 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper glume apex obtuse.
**Florets.** Fertile lemma elliptic, subterete, 5–8 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 20 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 4.5 mm long. Lateral lemma awns present, 15 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Southern Africa. Namibia, North-West, Northern Cape.


**TYPE** from Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: C. Wright 3432 [2432], 1865, Cuba (US-41161; IT: GOET, NY-71008). Orig. publ. cites "...2432, which is an error for 3432."

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. held upright. Spikelets or inflorescence branches held erect.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 100–150 cm long. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Ligule a fringe of hairs. Leaf-blades flat, 50–100 cm long, 3–5 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 12–15 mm long, 1.2 length of upper glume, membranous, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate or setaceously acuminate. Upper glume linear, 10–12 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acuminate or setaceously acuminate.

**Florets.** Fertile lemma linear, subterete, 12–13 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 20–30 mm long limb. Lateral lemma awns present, spreading less than principal, 15–25 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Cuba.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 182, Fig.8 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 45–75 cm long. Culm-internodes smooth, distally glabrous. Lateral branches fastigate. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.3 mm long. Leaf-blades filiform, involute, 4–8 cm long, 0.5 mm wide. Leaf-blade surface scabrous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted or spiciform, linear, 10–15 cm long, 1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 7–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6.5–10 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface smooth to scabrous. Lower glume apex emarginate or acute, awned, 1 -awned, awn 0.5–1.3 mm long. Upper glume lanceolate, 6.7–10 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate, awned, 1 -awned, awn 0.5–1.3 mm long.

Florets. Fertile lemma lanceolate, suberete, 7–11 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins involute, covering most of palea, without distinctive roughness. Lemma apex acute, awned, 3 -awned. Principal lemma awn spreading, with 9.5–11 mm long limb, without a column, persistent. Lateral lemma awns present, spreading as much as principal, 8.5–10.5 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 5–6 mm long. Hilum linear, 0.2–0.3 length of caryopsis.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 40–70 cm long. Ligule a fringe of hairs. Leaf-blades flat or convolute, 4–20 cm long, 1–3 mm wide. Leaf-blade surface ribbed, pubescent, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or oblong, 3–20 cm long. Primary panicle branches appressed or spreading, simple, bearing spikelets almost to the base. Panicle branches glabrous in axils or bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or lanceolate, 7.5–12 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute, mucronate. Upper glume subulate or lanceolate, 8–13 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse or acute, mucronate.

Florets. Fertile lemma lanceolate, suberete, 7–9.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute, covering most of
palea. Lemma apex acute, awned, 3-awned. Principal lemma awn triquetrous below, with 13–20 mm long limb, without a column, persistent. Lateral lemma awns present, ascending, 8–15 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa, Temperate Asia.


**Illustrations (Books):** B.Rosengurtt, *Gramineas UruguayasI* (1970) (210, Fig. 86).

**Derivation** (Clifford & Bostock 2007): L. filum, thread; folium, leaf. Leaf-blades very narrow.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 40–80 cm long. Lateral branches lacking. Leaf-sheaths striately veined, smooth. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blade convolute, 25–30 cm long, 0.5–1 mm wide.

**Inflorescence.** Inflorescence a panicle, comprising 7–12 fertile spikelets. Panicle open, dense, 20–40 cm long, bearing few spikelets. Primary panicle branches appressed or ascending, 1–2-nate, bearing 1–2 fertile spikelets on each lower branch.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, 30–50 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated.

**Glumes.** Glumes persistent. Lower glume lanceolate, 18–20 mm long, 0.4–0.6 length of upper glume, 3-veined. Lower glume apex acuminate. Upper glume lanceolate, 30–50 mm long, 1-veined. Upper glume apex acuminate.

**Florets.** Fertile lemma subterete, 16–20 mm long, without keel, 3-awned, 0–3-awned. Lemma surface asperulous, rough above. Lemma margins convolute. Lemma apex with outer margin prolonged as a hyaline appendage, with this appendage 0.2–0.5 mm long, awned, 3-awned. Principal lemma awn straight, with 100–150 mm long limb. Lateral lemma awns present, ascending, 100–150 mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.


**TYPE** from Argentina. **T:**<Type of Basionym> fide TROPICOS and Kew Synonomy Database: Csrdoba: Sierra de Pocho falda O. cerca de los tuneles subiendo desde la llanura oeste, ruta 20, 5 Mar 1959, A.T. Hunziker, A. Cocucci & J.A. Caro 14174 (HT: CORD)

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. flabella, fan; -ata, possessing. Culms fan-shaped at the base.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

internode, striately veined, smooth or scaberulous. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Collar glabrous. Leaf-blades conduplicate or convolute, 3.5–15 cm long, 1.5–2 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins scaberulous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 5–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–0.75 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–7 mm long, 0.75 length of upper glume, membranous, 1 -veined. Lower glume primary vein ciliolate. Lower glume lateral veins absent. Lower glume apex mucronate. Upper glume lanceolate, 5–9 mm long, 1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

**Florets.** Fertile lemma linear, suberete, 5.5–8.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 8–15 mm long limb. Lateral lemma awns present, 6–13 mm long, subequal to principal or shorter than principal. Palea 1 mm long, 0.1–0.2 length of lemma, hyaline, 0 -veined.

**Flower and Fruit.** Lodicules 2. Anthers 3. Caryopsis with adherent pericarp, 7–7.5 mm long, light brown.


**Aristida flaccida** Trin.& Rupr. *Mem. Acad. Petersb. Ser. 6, 7: 117. (1842).*


**TYPE** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: Langsdorff s.n., Jan, Brazil: in montibus Carassae prope Capanima (LE-TRIN-1302.01). IT: L. Riedel s.n., Jan 1876-Feb 1876, Brazil: in montibus Carassae prope Capanima (US-81045 (fragm. e XLE)).

**Illustrations (Books):** L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (507, Fig. 108).

**Derivation** (Clifford & Bostock 2007): L. unable to support its own weight. Inflorescence branches long and thin and so droop.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 26–45 cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades straight, convolute, 8–32 cm long, 1.2–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open (pauciflore), 16–20 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets suberete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.7 mm long, pilose, acute (subacute).


**Florets.** Fertile lemma suberete, 19–25 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma aawn straight, ascending, simple at base, with 19–25 mm long limb, without a column. Lateral lemma awns present, ascending, (4–)7–8(–9) mm long, shorter than principal.
Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil Southeast, Brazil North, Brazil South.


**Derivation** (Clifford & Bostock 2007): L.-ana, indicating location. From Florida State, USA.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 60 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute, 2–3 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume linear, 6–7 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume linear, 6–7 mm long, 0.9–1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn curved, ascending, 20 mm long overall, with 20 mm long limb. Lateral lemma awns absent.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.
Country /Province /State. Southeastern USA, Mexico. Florida. Southeast Mexico.
Campeche, Quintana Roo, Yucatan.


**Derivation** (Clifford & Bostock 2007): in honor of Paul Irwin Forster (1961-) Australian botanist.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 25–50 cm long, 1–1.5 mm diam., 2–3 -noded. Culm-internodes scaberulous, distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, scaberulous, glabrous on surface. Ligule a fringe of hairs, 0.6 mm long. Collar glabrous. Leaf-blades involute, 7–14 cm long, 1 mm wide. Leaf-blade surface scaberulous, glabrous.
**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 7–13 cm long, 1 cm wide. Primary panicle branches appressed, 1–2 cm long. Panicle branches scaberulous, with insignificant pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 3.5–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4 mm long, pubescent, obtuse. Floret callus hairs 0.7 mm long.

**Glumes.** Glumes lower deciduous, upper persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.5–4.5 mm long, 1.1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume lanceolate, 3.2–4.2 mm long, membranous, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute, mucronate.

**Florets.** Fertile lemma linear, subterete, 2.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins involute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 8 mm long limb. Lateral lemma awns present, 6 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, ellipsoid, sulcate on hilar side, 2 mm long. Embryo 0.33 length of caryopsis.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–50 cm long, wiry. Lateral branches lacking. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute, 1–10 cm long, 1–2 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, pungent.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 4 mm long, 0.6 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous, rough above. Lower glume apex acute. Upper glume linear, 7 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading, with 10 mm long limb. Lateral lemma awns present, ascending, 10 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Cuba.

Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 17 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs scanty. Ligule a fringe of hairs. Leaf-blades convolute, 2–6 cm long, 0.5–1 mm wide. Leaf-blade surface smooth, glabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.5 mm long, pilose, obtuse. Floret callus hairs 1.5 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 4–6 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 4–6 mm long, 0.66–0.8 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent.

Florets. Fertile lemma elliptic, laterally compressed, 5–9 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, muticous or awned, 1 -awned. Principal lemma awn straight, 0.5–1.5 mm long overall.


TYPE from Bolivia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: R.E. Froes 1301a, 28 Feb 1902, Bolivia: Junaca prope Tarija, loco graminoso in regione subalpina (W-22175 (photo, herb. Sulekic)).


Illustrations (Journals): Darwiniana (41: 170, fig.6 (2003)).


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear , subterete, 8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.25 mm long, pubescent, obtuse.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7 mm long, 0.85 length of upper glume, membranous, 3 -veined. Lower glume primary vein scabrous. Lower glume surface scabrous, rough on veins. Lower glume apex acuminate, mucronate. Upper glume lanceolate, 8 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, acuminate, mucronate.
**Florets.** Fertile lemma linear, subterete, 7–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface granulose. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck, awned, 3 -awned. Principal lemma awn 3-branched, with 9–10 mm long limb. Lateral lemma awns present, 8 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus. Hilum linear.

**Distribution (TDWG).** Continent. South America.


Derivation (Clifford & Bostock 2007): L. funis, rope; -ula, diminutive; -ata, possessing. The twisted column of the awn resembles a rope.


Habit, Vegetative Morphology. Annual, caespitose. Culms 15–30 cm long, wiry. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 4–10 cm long, 1–2 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 20–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, pilose, pungent.


Florets. Fertile lemma elliptic, subterete, 4 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 35–45 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn (2–)3–4.5 mm long. Lateral lemma awns present, 35–45 mm long, subequal to principal. Palea 0.25 length of lemma, without keels.

Flower and Fruit. Anthers 3.

n = 11 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia, Tropical Asia.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 50–60 cm long. Leaf-sheaths scaberulous, glabrous on surface. Leaf-sheath oral hairs lacking. Ligule a fringe of hairs. Leaf-blades involute, 5–10 cm long, 1–2 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, loose, 10–15 cm long. Primary panicle branches ascending, 1-nate, 3 cm long, bearing 4–6 fertile spikelets on each lower branch. Spikelets solitary.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12 mm long, 1.1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 11 mm long, 1.4 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent.

**Florets.** Fertile lemma linear, subterete, 8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, recurved at base of limb, with 8 mm long limb, with twisted column. Column of lemma awn 6 mm long. Lateral lemma awns present, 1 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: North America.

**Country /Province /State.** Mexico. Gulf (Mexico). Veracruz.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. of the same clan. Belonging in the same Section of the genus.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 50–100 cm long, 1–2 -noded. Culm-internodes smooth or scaberulous. Leaf-sheaths keeled. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs. Leaf-blades convolute, 10–20 cm long, 2–3 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex filiform.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75 mm long, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 14 mm long, 1.05–1.1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous.

**Florets.** Fertile lemma linear, subterete, 11 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 15 mm long limb. Lateral lemma awns present, 12 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.


**TYPE** from Brazil. **Basionym or Replaced Name:** Chaetaria gibbosa Nees, Agrost. Bras. 383 (1829). T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database: HT: K.F.P. von Martius s.n., May, Brazil: Piauhy: habitat in campis (M; IT: LE-TRIN-1 286.01 (misit Nees ab Esenb. 1830 & fig.),US-865702 (fragm. e XM & photo)).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. gibba, swelling; -osa, indicating abundance. Spikelets swollen asymmetrically.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms (32–)45–90 cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking or bearded (deciduous hairs). Ligule a ciliolate membrane, 0.2–0.4 mm long. Collar glabrous. Leaf-blades straight, conduplicate, 10.5–42 cm long, 1.8–2.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, hairless except near base, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, (8–)12–24 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight, 0.2–0.3 mm long, pilose, obtuse.

**Glumes.** Glumes persistent, dissimilar (lower in general slightly longer than upper, sometimes subequal or lower slightly shorter than upper). Lower glume lanceolate, 5.2–11.8 mm long, 1 -veined. Lower glume primary vein scabrous. Lower glume apex acute (shortly awned). Upper glume lanceolate, 5–9.8 mm long, 1 -veined. Upper glume surface smooth. Upper glume apex entire, acute (shortly awned).

**Florets.** Fertile lemma subterete, (4.5–)5–11.5 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface smooth, with a median groove (ventral,longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with (8–)8.8–19.5 mm long limb, with twisted column. Column of lemma awn (1–)1.5–4 mm long. Lateral lemma awns present, ascending, (6–)7–14 mm long, shorter than principal.

**Distribution (TDWG).** Continent. North America, South America (and Central America).


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online.

**TYPE** from Mexico. Basionym or Replaced Name: Chaetaria glauca Nees, Linnaea, 19: 688 (1847).

T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: A. Aschenborn 251, Mexico (B; IT: US-865703 (fragm. ex B & photo)).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. glauca, bluish-green. Whole plant or any of its parts glaucous.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, slender, 15–30 cm long. Culm-internodes distally glabrous or pubescent. Leaf-sheaths smooth or scaberulous, glabrous on surface or puberulous. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.2–0.5 mm long. Leaf-blades curved, involute, 5–10 cm long, 0.7–1.5 mm wide, stiff, glaucous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, pubescent, pungent.

**Glumes.** Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5–8 mm long, 0.5–0.66 length of upper glume, membranous, 1-veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 7–12 mm long, 0.9 length of adjacent fertile lemma, membranous, 1-veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 8–15 mm long, coriaceous, without keel, 3-veined, 0–3-veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 15–20 mm long limb, with twisted column. Column of lemma awn 1–4 mm long. Lateral lemma awns present, spreading as much as principal, 15–20 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

\(n = 22\) (1 ref TROPICOS). \(2n = 44\) (1 ref TROPICOS).

**Distribution (TDWG).** Continent: North America.

**Country /Province /State.** Southwestern USA, South-central USA, Mexico. Central Mexico, Northeast Mexico, Northwest Mexico, Southeast Mexico.


**Illustrations (Books):** S.A.Renvoize, The Grasses of Bahia, 1984 (53, Fig. 18 as A. glaziouii).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 100–130 cm long. Lateral branches sparse or lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.3–0.5 mm long. Collar glabrous or pubescent. Leaf-blades curled (lower) or straight (upper), flat (lower) or convolute (upper), 18–39 cm long, 1.5–4.5 mm wide. Leaf-blade surface scabrous, rough adaxially, pilose, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted (or subcontracted), 20–37 cm long.
**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.8–1 mm long, pilose, acute.


**Florets.** Fertile lemma subterete, 7–9.8 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough generally, without grooves. Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 17–30 mm long limb, without a column. Lateral lemma awns present, ascending, 14–28 mm long, shorter than principal.

**Distribution (TDWG).** Continent South America.

**Country /Province /State.** Western South America, Brazil. Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 197, Fig.11 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms geniculately ascending, 60–115 cm long. Culm-internodes smooth or scaberulous, distally glabrous. Lateral branches fastigate. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs, 0.5 mm long. Collar glabrous. Leaf-blades involute, 4–8 cm long, 0.5 mm wide. Leaf-blade surface scabrous, rough adaxially or on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 12–21 cm long, 1–3 cm wide. Primary panicle branches 4–6 cm long. Primary branches with insignificant pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 4–10 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Lower glume apex acuminate. Upper glume lanceolate, 4–10 mm long, 0.5–0.9 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate.

**Florets.** Fertile lemma lanceolate, subterete, 8–11 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn spreading, with 10–20 mm long limb, without a column, persistent. Lateral lemma awns present, spreading as much as principal, 10–16 mm long, subequal to principal or shorter than principal. Palea 0.2 length of lemma, without keels.
**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 6–8 mm long. Hilum linear, 0.5 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. New South Wales, Queensland.

North, Central, South East, Inland, Coast.

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**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 35 cm long. Culm-internodes smooth, distally glabrous. Lateral branches sparse. Leaf-sheaths smooth, glabrous on surface. Leaf-sheath oral hairs ciliate, 2–4.5 mm long. Ligule a fringe of hairs, 0.3 mm long. Leaf-blades involute, 10–21 cm long. 1.5 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 7–19 cm long, 8 cm wide. Primary panicle branches 3 -nate, 1–2.4 cm long. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, compressed slightly, 12–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.6 mm long, pubescent, acute. Floret callus hairs 1–1.5 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–8 mm long. 0.6 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 12–13 mm long. 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute or acuminate, muticous.

**Florets.** Fertile lemma lanceolate, laterally compressed, 8–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 22 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 12–14 mm long. Lateral lemma awns present, spreading less than principal, 11 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp. Hilum linear, 0.6 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Queensland.

Central.

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**Illustrations (Books):** G.Harling & C.Persson, *Flora of Ecuador* (2006) (57: 50, Fig. 9 (1997)).

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms erect, 40–60 cm long, 0.5 mm diam. Culm-internodes striate, scaberulous, distally glabrous. Leaf-sheaths subequal to internodes, striately veined, glabrous on surface. Leaf-sheath oral hairs lacking or ciliate, 1–2 mm long. Ligule a fringe of hairs, 0.2–0.4 mm long. Leaf-blades erect, convolute, 10–20 cm long, 2–2.5 mm wide. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle, bracteate at branch bases. Panicle open, linear, 10–30 cm long, 1–2 cm wide, contracted about primary branches. Primary panicle branches appressed, 1 -nate, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachill extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.7 mm long, pubescent, acute. Floret callus hairs 0.3–0.7 mm long.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–9 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute to attenuate. Upper glume lanceolate, 7–9 mm long, 1.4–1.8 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute to attenuate.

**Florets.** Fertile lemma linear, subterete, 5 mm long, 0.3–0.7 mm wide, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface asperulous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned or 3 -awned. Principal lemma awn with 10 mm long limb. Lateral lemma awns present, 6–10 mm long, subequal to principal or shorter than principal. Palea oblanceolate, 0.5 mm long, 2 -veined.

**Flower and Fruit.** Lodicules 2, 0.6 mm long. Anthers 3, 2–2.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. South America.
Country /Province /State. Western South America. Colombia, Ecuador.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 60–80 cm long. Leaf-sheath oral hairs woolly. Ligule a fringe of hairs. Leaf-blades curled, filiform, 1 mm wide. Leaf-blade surface glabrous. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachill extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 5.5–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–6 mm long, 0.9 length of upper glume, membranous. Lower glume apex acuminatae. Upper glume lanceolate, 5.5–7.5 mm long, membranous. Upper glume apex acuminatae.

**Florets.** Fertile lemma linear, subterete, 5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned or 3 -awned. Principal
lemma awn straight or geniculate, with 10 mm long limb, with a straight or slightly twisted column, persistent. Column of lemma awn 2 mm long. Lateral lemma awns absent or present, 0–1 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** South-central USA, Mexico. Texas. Northeast Mexico. Southern South America. Uruguay.

Coahuila, Chihuahua, San Luis Potosi.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, slender, 40–70 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades involute, 10–15 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5 mm long, pubescent, pungent.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 7–8 mm long, 0.7–0.8 length of upper glume, membranous, 2 -veined. Lower glume primary vein smooth. Lower glume apex setaceously acuminate. Upper glume linear, 10–11 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

**Florets.** Fertile lemma linear, subterete, 6 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex scabrous, with a short cylindrical neck, with this appendage 0.5 mm long, awned, 3 -awned. Principal lemma awn spreading, with 10–15 mm long limb. Lateral lemma awns present, gyrate, 10–15 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southeastern USA. Florida, South Carolina.


**Illustrations (Books):** B. Rosengurtt, Gramineas Uruguayas I (1970) (212, Fig. 87).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 20–30 cm long. Ligule a fringe of hairs. Leaf-blades involute, 4–7 cm long, 1 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade margins scaberulous. Leaf-blade apex attenuate, filiform.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or oblong, 6–10 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5 length of fertile spikelet, scabrous, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 13–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, obtuse.


**Florets.** Fertile lemma linear, subterete, 8–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 35–40 mm long limb, with twisted column. Column of lemma awn 4 mm long. Lateral lemma awns present, 35–40 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus. Hilum linear.


**Illustrations (Books):** F.W.Gould, *The Grasses of Texas* (1975) (397, Fig. 211).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–75 cm long. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute, 10–30 cm long, 1–3 mm wide. Leaf-blade surface scabrous, glabrous, hairless throughout or except near base.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 10–40 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading or reflexed, 8–15 cm long. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 9–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.


**Florets.** Fertile lemma linear, subterete, 10–15 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, ascending, with 8–25 mm long limb, with a straight or slightly twisted column. Column of lemma awn 2–3 mm long. Lateral lemma awns present, spreading less than principal, 8–25 mm long, subequal to principal or shorter than principal.

**Flower and Fruit.** Anthers 3. 

\[2n = 44.\]
Country /Province /State. Southwestern USA, South-central USA, Mexico. Arizona, California. New Mexico, Texas. Mesoamerica. Belize, Guatemala, Honduras.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Culms 60–90 cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades curled (lower) or straight (upper), flat (lower) or convolute (upper). 12–20 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight, 0.5–0.6 mm long, pilose, acute (subacute).


Florets. Fertile lemma subterete, 5–6(–8) mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous (denselly), rough above, with a median groove (ventral,longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn straight or flexuous (slightly), ascending or spreading, simple at base, with (16–)18–20(–25) mm long limb, with a straight or slightly twisted column. Column of lemma awn 3–3.8(–4) mm long. Lateral lemma awns present, ascending. 13–16(–23) mm long, shorter than principal.

Distribution (TDWG). Continent. South America.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 15–40 cm long. Culm-internodes distally glabrous. Leaf-sheaths without keel, outer margin hairy. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute, 5–15 cm long, 0.5–1.5 mm wide.
Inflorescence. Inflorescence a panicle, deciduous as a whole. Panicle open, oblong, effuse, 6–18 cm long. 0.5 of culm length. Primary panicle branches spreading or reflexed, 3–6 cm long. Panicle branches with prominent pulvini. Spikelets spreading, solitary. Fertile spikelets sessile. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pilose, obtuse.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–13 mm long. 1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminated. Upper glume lanceolate, 8–13 mm long. 1.6–1.8 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminated.

Florets. Fertile lemma linear, subterete, 5–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lower lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 8–22 mm long limb, with a straight or slightly twisted column. Column of lemma awn 2–5 mm long. Lateral lemma awns present, 8–22 mm long, subequal to principal.

Flower and Fruit. Anthers 3.


Illustrations (Journals): Austr. Syst. Bot. (5: 179, Fig.7 (1992)), Proc.Roy.Soc.Qld. (51:176,Pl.4 (1940)).


Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 12–32 cm long, 1.5–4 cm wide. Primary panicle branches 4–8 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, acute. Floret callus hairs 0.5–1 mm long.

Florets. Fertile lemma lanceolate, subterete, 4–5.5 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea, scabrous. Lemma apex acute, awned, 3 -awned. Principal lemma awn spreading, pseudo-articulate at base, with 17–40 mm long limb, without a column, persistent. Lateral lemma awns present, 15–38 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 3 mm long. Hilum linear, 0.2 length of caryopsis.

Country /Province /State. Australia. Queensland.

North, Central, South East.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–130 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs. Leaf-blades flat or involute, 25–50 cm long, 3–4 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Fertile callus pubescent, obtuse.

Glumes. Glumes similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.5–6.5 mm long, 0.5–0.75 length of upper glume, membranous, purple, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 7–8.5 mm long, 1–1.4 length of adjacent fertile lemma, membranous, purple, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex attenuate.

Florets. Fertile lemma linear, subterete, 5–9 mm long, coriaceous, purple, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 7–10 mm long limb, with twisted column. Column of lemma awn 5–6 mm long. Lateral lemma awns present, 1–2 mm long, shorter than principal.

Flower and Fruit. Anthers 3.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico, Southeast Mexico.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–70 cm long, 2–3 -noded. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades conduplicate or convolute, 4–8 cm long, 0.5–1 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex obtuse.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 10–15 cm long, with spikelets clustered towards branch tips. Primary panicle branches appressed or spreading, distant, 1–2 -nate, 1–6 cm long. Panicle branches glandular (in axils), pubescent, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, bearded, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 9–10 mm long, 1.2–1.5 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume surface puberulous. Lower glume apex acute, mucronate. Upper glume linear, 6–8.5 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous, rough above. Upper glume apex acuminat.

**Florets.** Fertile lemma elliptic, subterete, 5–5.5 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above or in lines. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 8–11 mm long limb, persistent. Lateral lemma awns present, 7–10 mm long, subequal to principal or shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: Africa.

**Country /Province /State.** South Tropical Africa. Zimbabwe.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30 cm long. Culm-internodes terete, striate, scaberulous, distally glabrous or pubescent. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blades flat or convolute, 15–25 cm long, 1–3 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade margins cartilaginous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 25 cm long, 1 cm wide, bearing few spikelets. Primary panicle branches appressed, 1 -nate, 5–6 cm long, bearing spikelets almost to the base. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 11 mm long, 1.1 length of upper glume, membranous, light brown or purple, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acute. Upper glume lanceolate, 10 mm long, 1.4 length of adjacent fertile.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, ascending, with 16–18 mm long limb, with twisted column. Column of lemma awn 3 mm long. Lateral lemma awns present, spreading less than principal, 9–10 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.


**TYPE** from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: Domin s.n., Dec 1910, Australia: Queensland: Cook Dist.: Huge und Savannenwalder, bei Chillagoe (L-926.361–524 (photo, BRI, K); IT: BRI).


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 157, Fig.3 (1992)).

**Images:** D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

**Derivation (Clifford & Bostock 2007):** Gk. holos, wholly; ather, spike or ear of wheat. Awn not disarticulating from base of lemma at maturity.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual or perennial, caespitose, clumped loosely or moderately. Culms 28–128 cm long, 2–5 -noded. Culm-internodes mid-green or glaucous, smooth or scaberulous, distally glabrous. Lateral branches lacking or sparse or ample. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate, 0.5–3 mm long. Ligule a fringe of hairs, 0.3–0.5 mm long. Collar glabrous or pubescent. Leaf-blades straight or flexuous, filiform or linear, flat or conduplicate or involute, 10–25 cm long, 2–4 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 8–41 cm long, 1–10 cm wide. Primary panicle branches 2 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 12–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.8–3 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–16 mm long, 0.6–0.7 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex emarginate. Upper glume lanceolate, 12–25 mm long, 1.5–2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper glume apex acute or acuminate, mucronate.

**Florets.** Fertile lemma lanceolate, subterete, 8–13.5 mm long, coriaceous, palill or light brown, mOTTed with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous or papillose, rough above. Lemma margins convolute, covering most of palea, without distinctive roughness. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 34–78 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 18–57 mm long. Lateral lemma awns present, 27–66 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.
Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, 4.8–7.9 mm long. Hilum linear, 0.3–0.4 length of caryopsis.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5–0.8 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–8 mm long, 0.8 length of upper glume, scarious, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface glabrous or hispidulous. Lower glume apex dentate, acute, awned, 1 -awned, awn 2.5–5 mm long. Upper glume lanceolate, 6–9 mm long, 1.2–1.3 length of adjacent fertile lemma, scarious, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface glabrous or hispidulous. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 1–4 mm long.

Florets. Fertile lemma elliptic, subterete, 5–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous (hooked prickles), rough in lines. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 25–35 mm long limb, deciduous, abscising from top of lemma. Lateral lemma awns present, 25–35 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.


TYPE from Namibia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Dinter 7600, Apr 1934, Namibia: Tsumeb (B).

Illustrations (Books): L.K.A. Chippindall, Grasses and Pastures of South Africa (1955) (311, Fig. 276).


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, obtuse.

Glumes. Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–7 mm long, 0.66–1 length of upper glume, membranous, 1 -keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex awned, 1 -awned. Upper glume lanceolate, 7 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume awned, 1 -awned.

Florets. Fertile lemma elliptic, subterete, 6–7 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins involute, covering most of palea. Lemma apex rostrate, awned, 3 -awned. Principal lemma awn with 20–30 mm long limb, persistent. Lateral lemma awns present, 20–30 mm long, subequal to principal. Palea without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, lanceolate, sulcate on hilar side.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Culms erect, 150–180 cm long. Ligule a fringe of hairs.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–6.75 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident.

Glumes. Glumes persistent, similar, exceeding apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–6.8 mm long, 0.75 length of upper glume, scarious, 1 -veined. Lower glume lateral veins absent. Lower glume apex awned, 1 -awned. Upper glume lanceolate, 6–6.75 mm long, 1.1 length of adjacent fertile lemma, scarious, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid.

Florets. Fertile lemma elliptic, subterete, 5.75–6 mm long, coriaceous, without keel. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, 1–1.5 mm long overall.


Country/Province/State. South Tropical Africa. Angola.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

TYPE from Tanzania. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Tanzania: Mpanda Dist.: 56 km on Uvinza-Mpanda road, 5°9’S, 30°2’E, 1600 m, 21 May 1007, Bidgood, Sitoni, Vollesen & Whitehouse 4406 (HT: K; IT: NHT).
Illustrations: None found.


Habit, Vegetative Morphology. Annual, culms solitary. Culms slender, 11–18 cm long. Leaves mostly basal. Leaf-sheaths smooth, strigilate veined. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades conduplicate, 2–3.5 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex abruptly acute.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8.6–9.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, winged, with this appendage 1.5 mm long, pubescent, 2-toothed.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or lanceolate, 8.6–9.7 mm long, 1.1–1.2 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume linear or oblong, 7.5–7.8 mm long, 2–2.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex attenuate, mucronate.

Florets. Fertile lemma linear, subterete, 3 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth, villous, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 18–22 mm long limb, with twisted column, persistent. Column of lemma awn 13–14 mm long. Lateral lemma awns present, 16–18 mm long, shorter than principal.

Flower and Fruit. Anthers 3.


Illustrations (Journals): *Austr. Syst. Bot.* (5: 157, Fig.3 (1992)).


Derivation (Clifford & Bostock 2007): Gk. *hygros*, water; *metron*, measure; -*ike*, belonging to. Aquatic or swamp species.


Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms erect or geniculately ascending, 29–84 cm long. Culm-internodes smooth, distally glabrous. Lateral branches lacking or sparse. Leaf-sheaths smooth, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate, 1–2 mm long. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades curled or flexuous, filiform, involute, 11–27 cm long, 0.8–1.2 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 25–43 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 4–6 mm long, pubescent, pungent. Floret callus hairs 0.4–1.3 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 13.5–23 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex emarginate or obtuse. Upper glume lanceolate, 25–42.6 mm long, 2.5–3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate, mucronate or awned, 1 -awned, awn 0.5–3.5 mm long.

**Florets.** Fertile lemma lanceolate, subterete, 8–16 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, flat below, with 85–150 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 53–85 mm long. Lateral lemma awns present, 81–140 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 6.6–8.5 mm long. Hilum linear, 0.33 length of caryopsis.

**Distribution (TDWG).** Continent: Australasia.
Country /Province /State: Australia. Northern Territory, Queensland, Western Australia.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

**TYPE** from India. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Stocks 187 (partim.), India: Sindh and Multan (CAL?).

**Illustrations (Books):** T.A.Cope, Flora of Pakistan 143: Poaceae (1982).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect, 5–15 cm long. Ligule a fringe of hairs. Leaf-blades curved, involute, 2–4 cm long, 1 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, 2–4 cm long, bearing few spikelets. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 9.5–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.6 mm long, pilose, 2-toothed.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–5.5 mm long, 0.5 length of upper glume, scarious, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 0.5–1 mm long. Upper glume lanceolate, 9.5–11 mm long, 3–4 length of adjacent fertile lemma, scarious, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 1–1.5 mm long.

**Florets.** Fertile lemma elliptic, subterete, 2.5–3.5 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface hispid. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 60 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 20 mm long. Lateral lemma awns present, 40 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: Tropical Asia.


**Recent Synonyms:** *Aristida rigidia* Roth, non Cav.(1799), *Nov. Pl. Sp.* 42 (1821).


**Derivation** (Clifford & Bostock 2007): resembling *Hystrix*. Usually a reference to the inflorescence resembling that of *Hystrix*.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 60–130 cm long. Culm-nodes glabrous. Leaf-sheaths 3.5–9 cm long. Leaf-sheath oral hairs cili ate. Ligule a fringe of hairs. Leaf-blades convolute, 10–40 cm long, 2–3 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, effuse, 10–20 cm long, 10–20 cm wide. Panicle branches capillary, bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 4–7 mm long, smooth.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 13–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.5–3 mm long, bearded, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–9 mm long, 0.66 length of upper glume, scarious, yellow, 1-keeled, 1 -veined. Lower glume lateral veins absent. Upper glume apex awned, 1 -awned, awn 2.5–3 mm long. Upper glume lanceolate, 13–14 mm long, 1.5 length of adjacent fertile lemma, scarious, yellow, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex awned, 1 -awned, awn 1.5–2 mm long.

**Florets.** Fertile lemma elliptic, subterete, 9–10 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 50–60 mm long limb, persistent. Lateral lemma awns present, 50–60 mm long, subequal to principal. Palea without keels.

**Flower and Fruit.** Anthers 3.


**TYPE** from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: T: *K. Domin s.n.*, Mar 1910, Australia: Queensland: North Kennedy Dist.: Savannenwldder bei Pentland (PR; IT: BR, L (photo, BRI)).


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 168, Fig.5 (1992)).


**Derivation** (Clifford & Bostock 2007): L. *inaequalis*, unequal; *gluma*, husk. Glumes differing in length and/or shape.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms 32–155 cm long, 1 -noded. Culm-internodes glaucous, smooth, distally glabrous. Lateral branches sparse. Leaf-sheaths longer than adjacent culm internode, smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs pubescent, 0.3–1.1 mm long. Ligule a fringe of hairs, 1 mm long. Collar glabrous. Leaf-blades curled, 15–30 cm long, 2.3–4.5 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate, equilateral or nodding, 13–40 cm long, 1.5–4 cm wide. Primary panicle branches appressed, 4 -nate, 4–8 cm long, bearing spikelets almost to the base. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9–18.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.9–1.5 mm long, pubescent, acute.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–18.5 mm long, 1.4 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Lower glume apex emarginate, mucronate. Upper glume lanceolate, 6.4–13 mm long, 1.4–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate, mucronate, 1 -awned.

**Florets.** Fertile lemma lanceolate, subterete, 3.7–9 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above. Lemma margins involute, covering most of palea, without distinctive roughness or tuberculate (along groove). Lemma apex acute, awned, 3 -awned. Principal lemma awn pseudo-articulate at base, with 14–46 mm long limb, without a column, persistent. Lateral lemma awns present, 11–40 mm long, subequal to principal or shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 3.1–7 mm long. Hilum linear, 0.4–0.5 length of caryopsis.

**Distribution (TDWG).** Continent: Australasia.

**Country /Province /State.** Australia. Northern Territory, Queensland, South Australia, Western Australia. Kimberley, Eremean. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre. North, Central, Inland.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 179, Fig.7 (1992)).


**Derivation** (Clifford & Bostock 2007): L. disagreeable. The sharp callus enables the spikelets to catch on to clothing.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms 41–155 cm long. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate, 4 mm long. Ligule a fringe of hairs, 0.5–1 mm long. Collar pubescent. Leaf-blades curled, 10–23 cm long, 3–4 mm wide. Leaf-blade surface scabrous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or lanceolate, 11–42 cm long, 1.5–4 cm wide. Primary panicle branches bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–14 mm long, 1–1.2 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Lower glume apex acute to setaceous acuminate. Upper glume lanceolate, 6–12 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex emarginate or acute or acuminate, muticous or mucronate.

**Florets.** Fertile lemma lanceolate, subterete, 4–8 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface papillose. Lemma margins involute, covering most of palea, without distinctive roughness. Lemma apex acute, awned, 3 -awned. Principal lemma awn pseudo-articulate at base, triquetrous below, with 10–30 mm long limb, without a column, persistent. Lower lemma awns present, 8–28 mm long, subequal to principal or shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side. Hilum linear, 0.5 length of caryopsis.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *inverto*, turn upside down. Contrary to expectation, the lower glume is larger than the upper glume.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or oblong, 20–30 cm long, 1 cm wide, contracted about primary branches. Primary panicle branches appressed, 2 -nate, 4–8 cm long. Panicle axis smooth. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

**Glumes.** Glumes dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or lanceolate, 12 mm long, 3–4 length of upper glume, membranous, 1 -veined. Lower glume primary vein ciliolate. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, awned, 1 -awned. Upper glume lanceolate, 3–4 mm long, 0.5 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex obtuse or acute.

**Florets.** Fertile lemma linear, subterete, 7–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 30 mm long limb. Lower lemma awns present, 30 mm long, subequal to principal. Palea oblong, 1.5–2 mm long, 0.2–0.25 length of lemma, hyaline, 0 -veined.

**Flower and Fruit.** Lodicules 2, 1.75 mm long. Anthers 3. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Western South America, Southern South America. Bolivia. Argentina Northeast.

Buenos Aires.


**Illustrations (Journals):** *Telopea* (13: 151, Fig 1 (2011)).

**Derivation** (Clifford & Bostock 2007): named for Surrey Jacobs (1946–2009), Senior Principal Research Scientist at the National Herbarium of New South Wales (NSW).

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms 20–60 cm long, 4–6 -noded. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths longer than adjacent culm internode, smooth, glabrous on surface. Leaf-sheath oral hairs ciliate, 1–2 mm long. Ligule a fringe of hairs, 0.2 mm long. Collar pilose. Leaf-blades filiform or linear, flat or conduplicate or involute or convolute, 5–12 cm long, 1–2 mm wide. Leaf-blade surface scaberulous, rough abaxially, glabrous. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, continuous or interrupted, 5–20 cm long, 0.5–2 cm wide. Primary panicle branches appressed, 2 -nate, 1–2.5 cm long. Panicle branches scaberulous or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 6–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5–1 mm long, pubescent, acute. Floret callus hairs 0.1–0.3 length of lemma.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.5–6.5 mm long, 0.5–0.6 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute or acuminate, mucronate, awn 1–2 mm long. Upper glume lanceolate, 6–11 mm long, 1.1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute acuminate, mucronate, awn 0.5–1.5 mm long.

**Florets.** Fertile lemma lanceolate, suberete, 5.5–9 mm long, coriaceous, without keel, 3 -veined, 0–3 - veined. Lemma midvein scabrous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 9–18 mm long limb, with a straight or slightly twisted column, persistent. Column of lemma awn 1.5–2 mm long. Lateral lemma awns present, spreading as much as principal, 9–185 mm long, subequal to principal.

**Distribution (TDWG).** Continent: Australasia.

**Country /Province /State.** Australia. Northern Territory, Queensland.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -*anum*, indicating location. From Jalisco, Mexico.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 60–100 cm long. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades involute, 14–30 cm long, 3 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 20–30 cm long, 1 cm wide. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets linear, subterete, 11–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident.

**Glumes.** Glumes shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 9–11 mm long, 1 length of upper glume, membranous, 1-keeled. Lower glume primary vein scaberulous. Lower glume surface pilose. Lower glume apex dentate, 2 -fid, awned, 1 -awned. Upper glume lanceolate, 9–11 mm long, 0.75 length of adjacent fertile lemma, membranous. Upper glume primary vein scaberulous. Upper glume surface pilose. Upper glume apex dentate, 2 -fid, awned, 1 -awned.

**Florets.** Fertile lemma linear, subterete, 11–14 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 9–15 mm long limb, with twisted column. Column of lemma awn 2.5–5 mm long. Lateral lemma awns present, spreading as much as principal, shorter than principal.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Illustrations (Journals):** Austr. Syst. Bot. (5: 176, Fig.6 (1992)).

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Jericho, Queensland, Australia.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms 30–60 cm long. Culm-internodes smooth, distally glabrous. Lateral branches sparse. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.5–1 mm long. Collar glabrous or pubescent. Leaf-blades flexuous, involute, 16–18 cm long, 2 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicule. Panicle contracted, linear or lanceolate, 4–15 cm long, 1–2 cm wide. Primary panicle branches 1–3.5 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–9 mm long, 1 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume surface smooth to scabrous. Lower glume apex acute or
acuminate, muticous or mucronate. Upper glume lanceolate, 5–9 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume lateral veins absent or distinct. Upper glume surface smooth to scabrous. Upper glume apex emarginate or obtuse, muticous or mucronate.

**Florets.** Fertile lemma lanceolate, suberete, 4–7 mm long, coriaceous, pallid or light brown or purple, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea, without distinctive roughness or scabrous. Lemma apex acute, awned, 3 -awned. Principal lemma awn flat below, with 12–24 mm long limb, without a column, persistent. Lateral lemma awns present, 10–21 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 3.5–4.5 mm long. Hilum linear.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** New South Wales, Northern Territory, Queensland, South Australia.


**Type** from Mexico. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Bonpland s.n., Sep, Mexico: Playas de Jorullo (P; IT: US-77249 (fragm. & photo)).

**Illustrations (Books):** W.Burger, Flora Costaricensis 15, Gramineae: Fieldiana Botany New Series 4 (1980) (54, Fig. 13).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose, clumped densely. Culms 10–60 cm long, 1–8 -noded. Culm-internodes solid, distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.1–0.2 mm long. Leaf-blades conduplicate or involute, 4–20 cm long, 1–1.5 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially, pilose, sparsely hairy, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 5–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute. Floret callus hairs 1 mm long.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume linear, 4.5–9 mm long, 0.9–1.1 length of upper glume, membranous, 1–3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume linear, 5–8.5 mm long, 1.2 length of adjacent fertile lemma, membranous, 1–3 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent or distinct. Upper glume apex acute.

**Florets.** Fertile lemma linear, laterally compressed, 4–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above or in lines. Lemma margins convolute, covering most of palea. Lemma apex attenuate, awned, 1 -awned. Principal lemma awn flexuous, 10–16 mm long overall, with 10–16 mm long limb, without a column. Lateral lemma awns present. Palea 1–1.5 mm long.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 3.5–4.5 mm long. 

2n = 22 (2 refs TROPICOS).

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Mexico. Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Northern South America, Western South America. Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Venezuela. Colombia.


Derivation (Clifford & Bostock 2007): L. jubum, mane; -ata, possessing. The inflorescence or awn resembles a fox tail.


Habit, Vegetative Morphology. Perennial. Culms 40–80 cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades straight, convolute, 25–30 cm long, 0.5–1 mm wide. Leaf-blade surface scabrous, rough on both sides, glabrous. Leaf-blade apex acute, antrorsely scabrous.

Inflorescence. Inflorescence a panicle. Panicle open (patent), 20–40 cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 1 mm long, pilose, acute.


Florets. Fertile lemma subterete, (11–)14–16 mm long, without keel, rounded except near apex, 3 -veined, 0–3 -veined. Lemma surface scabrous or smooth (less frequent), rough above, without grooves. Lemma margins convolute. Lemma apex with outer margin prolonged as a hyaline appendage, with this appendage 1–1.5 mm long, awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with (125–)150–230 mm long limb, without a column. Lateral lemma awns present, ascending, (125–)150–230 mm long, subequal to principal.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.


Illustrations (Books): L.K.A. Chippindall, Grasses and Pastures of South Africa (1955) (309 & 312, Fig. 274 & 278 & as A. galpinii).


Habit, Vegetative Morphology. Perennial, caespitose. Roots simple (spongy). Rhizomes absent or short. Culms 20–60 cm long. Culm-internodes elliptical in section (below nodes), distally glabrous. Leaf-sheath oral hairs lacking or bearded. Ligule a fringe of hairs. Leaf-blades straight or curled, involute, 10–30 cm long, 1–1.5 mm wide. Leaf-blade surface glabrous or pubescent, hairy adaxially.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 6–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3–0.5 mm long, bearded, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–7 mm long, 0.6–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acuminate, muticus or mucronate or awned, 1 -awned, awn 0–2 mm long. Upper glume lanceolate, 6–9 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, muticus or mucronate or awned, 1 -awned, awn 0–2 mm long.

**Florets.** Fertile lemma elliptic, subterete, 5–6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 30–60 mm long limb, with a straight or slightly twisted column, persistent. Column of lemma awn 1–3(–6) mm long. Lateral lemma awns present, 7–17 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

2n = 24 (2 refs TROPICOS).

**Distribution (TDWG).** Continent: Africa.

|-------------------------|--------------------------------------------------------------------------------------------------------------------------|


**Inflorescence.** Inflorescence a panicle. Panicle spiciform, oblong, 3–4 cm long. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 9–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5–1 mm long, pilose, pungent.


Florets. Fertile lemma elliptic, suberete, 3–3.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 30–60 mm long limb, with twisted column, deciduous, abscessing from top of lemma. Column of lemma awn 7–20 mm long. Lateral lemma awns present, 15–30 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.
Flower and Fruit. Anthers 3.


Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 15–90 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 5–15 cm long, 1–3 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 5–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.2 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5–8 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 5–8 mm long, 0.9–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume apex acute.

Florets. Fertile lemma elliptic, laterally compressed, 5–9 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 6–15 mm long limb, persistent. Lateral lemma awns present, 6–15 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Otto Kersting (-) German botanist.


Habit, Vegetative Morphology. Annual, caespitose. Culms 30–90 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades filiform, involute, 10–20 cm long, 1–1.5 mm wide, stiff. Leaf-blade surface scaberulous, rough adaxially.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 6–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pubescent, with longer hairs above, 2-toothed.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 15–20 mm long, 0.6–0.7 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume surface scabrous. Lower glume apex acuminate, awned, 1 -awned, awn 12–15 mm long. Upper glume linear, 20–30 mm long. 5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic, suberete, 5–6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 45–110 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 30–70 mm long. Lateral lemma awns present, 25–95 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** West Tropical Africa, West-Central Tropical Africa. Burkina, Ghana, Guinea, Ivory Coast, Nigeria, Senegal, Togo. Cameroon.


**Illustrations (Journals):** Austr. Syst. Bot. (5: 204, Fig.12 (1992)).

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From the Kimberley Region of north-western Australia.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms rambling, 50–100 cm long. 6 -noded. Culm-internodes smooth, distally glabrous. Lateral branches sparse. Ligule a fringe of hairs, 0.3 mm long. Leaf-blades 10–20 cm long, 2 mm wide. Leaf-blade surface scaberulous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 12–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–15 mm long, 1.1–1.2 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 10–14 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate or acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 9–14 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scabrous, rough above. Lemma margins convolute, covering most of palea.Lemma apex acute, awned, 3 -awned. Principal lemma awn with 20–25 mm long limb, without a column, persistent. Lateral lemma awns present, 18–23 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia.
Kimberley.


**TYPE** from Senegal. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: prope Richard-Tol., *Lelivre s.n.* (HT: B (herb. Kunth)).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Karl Sigismund Kunth (1788–1850), German botanist.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Butt sheaths glabrous. Culms 30–45 cm long. Culm-internodes distally glabrous. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blades flat or convolute, 5–20 cm long, 2–3 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 6–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75 mm long, pilose, acute.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–8 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex dentate, awned, 1 -awned, awn 1–2 mm long. Upper glume lanceolate, 5–8 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent.

**Florets.** Fertile lemma elliptic, suberete, 5–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough in lines. Lemma margins involute, covering most of palea. Lemma apex acuminate, awned, 3 -awned. Principal lemma awn 3-branched, with 15–25 mm long limb, without a column, deciduous, absicssing from top of lemma. Lateral lemma awns present, 10–20 mm long, subequal to principal or shorter than principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** West Tropical Africa. Mali, Senegal.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 60–100 cm long. Culm-internodes distally glabrous. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades curved or flexuous, involute, 10–20 cm long, 0.5–1 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets linear, subterete, 12–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes dissimilar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume linear, 12 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous, rough above. Lower glume apex acuminate. Upper glume linear, 12 mm long, 0.9–1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous, rough above. Upper glume apex dentate, 2 -fid, acute, mucronate.

**Florets.** Fertile lemma linear, subterete, 12–14 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading or reflexed, with 12–20 mm long limb. Lateral lemma awns present, spreading less than principal, 2–5 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Cuba.


**Derivation** (Clifford & Bostock 2007): *L. laevis*, smooth. Lacking hairs or roughness, usually of leaf-blades or lemmas.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 40–130 cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking or scanty (deciduous). Ligule a ciliolate membrane, 0.2 mm long. Collar pubescent (continuous). Leaf-blades straight, flat or conduplicate (less frequent), (8–)15–60 cm long, 1.7–3.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted (linear), 10–30 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.7–1 mm long, pilose, acute (subacute).


**Florets.** Fertile lemma subterete, 10–14 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with (23–)25–40(–46) mm long limb, without a column. Lateral lemma awns present, ascending, (23–)25–40(–46) mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Brazil, Southern South America. Bolivia, Brazil West Central, Brazil Southeast, Brazil South. Argentina Northwest, Argentina Northeast, Paraguay, Uruguay.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Culms 85–95 cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking. Ligule a ciliolate membrane, 0.3–0.5 mm long. Collar glabrous. Leaf-blades curled (lower) or straight (upper), flat (lower) or convolute (upper), 40–60 cm long, 2.8–5 mm wide. Leaf-blade surface woolly, hairless throughout, densely hairy, hairy adaxially. Leaf-blade apex acute, antrorsely scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted (or subcontracted), 15–29 cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight, 0.5 mm long, pilose, obtuse (subobtuse).


Florets. Fertile lemma subterete, 8–8.5 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 11–18 mm long limb, without a column. Lateral lemma awns present, ascending, 9–16 mm long, slightly shorter than principal.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central.


Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths woolly. Culms 70–150 cm long. Lateral branches lacking. Leaf-sheaths without keel, woolly. Ligule a fringe of hairs, 0.2–0.5 mm long. Leaf-blades filiform, flat or involute, 20–50 cm long, 1–3 mm wide. Leaf-blade surface scabrous, glabrous or hispid, sparsely hairy.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 15–40 cm long, 2–8 cm wide. Primary panicle branches appressed or ascending, 6–15 cm long. Spikelets solitary. Fertile spikelets sessile. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets linear, subterete, 12–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–14 mm long, 1.2–1.5 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth or scabrous. Upper glume lanceolate, 10 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth or scabrous. Upper glume apex setaceously acuminately.

**Florets.** Fertile lemma linear, subterete, 8–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading or reflexed, with 15–25 mm long limb, without a column. Lateral lemma awns present, spreading less than principal, 10–15 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: North America.

Country /Province /State: North-central USA, South-central USA, Southeastern USA. Oklahoma. Texas. Alabama, Arkansas, Georgia, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 188, Fig.9 (1992)).


**Derivation** (Clifford & Bostock 2007): L. *latus*, broad; *folium*, leaf. Leaf-blades broad or relatively broad with respect to related species.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms 20–131 cm long, 2 -noded. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths scaberulous, glabrous on surface. Leaf-sheath oral hairs lacking or bearded, 0–6 mm long. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blades curled, 35–70 cm long, 2–4.5 mm wide. Leaf-blade surface scaberulous, rough adaxially.

**Inflorescence.** Inflorescence a panicule. Panicle contracted, linear, 8–69 cm long, 3–3.5 cm wide. Primary panicle branches 5–10 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5–1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–13 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex acute or acuminate, muticous or awned, 1 -awned, awn 0.4 mm long. Upper glume lanceolate, 8–17 mm long, 1–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral
veins absent. Upper glume surface asperulous or scabrous. Upper glume apex acute or acuminate, muticous or awned, 1-awned, awn 0–4 mm long.

**Florets.** Fertile lemma lanceolate, suberete, 8–11 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3-veined, 0–3-veined. Lemma surface smooth or tuberculate, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3-awned. Principal lemma awn 3-branched, with 17–50 mm long limb, with a straight or slightly twisted column or with twisted column, persistent. Column of lemma awn 1–9 mm long. Lateral lemma awns present, 15–45 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 5–7.5 mm long. Hilum linear.

**Distribution (TDWG).** Continent: Australasia.
Country /Province /State: Australia. New South Wales, Northern Territory, Queensland, South Australia, Western Australia.


**Derivation** (Clifford & Bostock 2007): in honor of Peter Kenneth Latz (1941-) Australian botanist.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 45–90 cm long. Culm-internodes scaberulous, distally glabrous. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, scaberulous. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades filiform, involute, 10–20 cm long, 1 mm wide, stiff.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 10–37 cm long, 1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4 mm long, pubescent, acute. Floret callus hairs 1.2 mm long.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–9 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume lanceolate, 7–10 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1-veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 7–9 mm long, coriaceous, without keel, 3-veined, 0–3-veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3-awned. Principal lemma awn flat below, with 6–15 mm long limb, without a column, persistent. Lateral lemma awns present, 6–15 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp. Hilum linear, 0.5 length of caryopsis.

**Distribution (TDWG).** Continent: Australasia.
Country /Province /State: Australia. Northern Territory.
Central Australia.
Aristida laxa Cav. Icon. 5: 44–45, f. 470, t. 1. (1799).


**Illustrations (Books):** G.Harling & C. Persson, Flora of Ecuador (2006) (57: 45, Fig. 8 (1997)), K. Domin, Bibliotheca Botanica 85 (1915) (34, as longiramea).

**Illustrations (Journals):** Darwiniana (41: 173, fig. 7 (2003) as var. longiramea).

**Derivation** (Clifford & Bostock 2007): L. loose. Inflorescence much branched either as a single panicle or from branching of the culms.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. But sheaths persistent and investing base of culm, with curly dead sheaths. Culms 50–100 cm long, 1–1.5 mm diam. Culm-internodes solid, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths keeled, glabrous on surface. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute, 15–30 cm long, 1–2.5 mm wide. Leaf-blade surface ribbed, scaberulous, rough abaxially, glabrous, hairless except near base.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute. Floret callus hairs 1–1.5 mm long.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 9.5–11.5 mm long, 0.9 length of upper glume, membranous. Lower glume surface scabrous. Lower glume apex acute. Upper glume linear, 10–12 mm long, 1 length of adjacent fertile lemma, membranous. Upper glume surface smooth. Upper glume apex acute.

**Florets.** Fertile lemma linear, suberete, 10–12 mm long, coriaceous, without keel, 3 -veined, 0–3 - veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 24–30 mm long limb, with a straight or slightly twisted column. Column of lemma awn 5–9 mm long. Lateral lemma awns present, shorter than principal.

**Flower and Fruit.** Anthers 3, 1.6 mm long.

2n = 44 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Mexico. Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico, Mexico. Mesoamerica, Northern South America, Western South America, Southern South America. Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Venezuela. Colombia, Ecuador. Argentina Northeast.


Aristida leichhardtiana Domin. Fedde, Repert. 9: 551 (1911).


TYPE from Australia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Leichhardt s.n., 10 Jan 1847, Australia: Queensland: Port Curtis District: Dry-beef Creek (K (photo, BRI); IT: BRI (fragm.), L, MEL).


Illustrations (Journals): Austr. Syst. Bot. (5: 204, Fig.12 (1992)).


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms slender, 25–45 cm long. Culm-internodes smooth, distally glabrous. Lateral branches sparse. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs lacking or ciliate, 2–3 mm long. Ligule a fringe of hairs, 0.5–1 mm long. Collar glabrous. Leaf-blades involute, 6–12 cm long, 1–1.5 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, effuse, 5–8 cm long, 3–6 cm wide. Primary panicle branches 1–2.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.
**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–12 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth to scabrous. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume lanceolate, 4.5–12 mm long, 0.5–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface smooth to scabrous. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 9–10.5 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea, scaberulous. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 12.5–25 mm long limb, without a column, persistent. Lateral lemma awns present, 11–23 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 6.5 mm long. Hilum linear, 0.5 length of caryopsis.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 207, Fig.13 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–65 cm long, 1–3 -noded. Culm-internodes smooth, distally glabrous. Lateral branches fastigiate. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.5–1 mm long. Collar glabrous or pubescent. Leaf-blades involute, 15–30 cm long, 3.5 mm wide. Leaf-blade surface scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, acute.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–22 mm long, 1 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent or obscure. Lower glume apex acute or acuminate. Upper glume lanceolate, 9–22 mm long, 0.75–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent or obscure. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 12–17 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn curved, with 23–30 mm long limb,
without a column, persistent. Lateral lemma awns present, 19–25 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, fusiform, 10.5 mm long. Hilum linear, 0.5 length of caryopsis.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk. leptos, slender; oura, tail. Awns filiform.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 25–55 cm long. Ligule a fringe of hairs. Leaf-blades involute, 6–20 cm long, 1 mm wide. Leaf-blade surface pubescent, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.5–3 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 20 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex attenuate, awned, 1 -awned, awn 10 mm long. Upper glume linear, 20 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume apex attenuate, awned, 1 -awned, awn 10 mm long.

**Florets.** Fertile lemma lanceolate, subterete, 10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 60–65 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 30 mm long. Lateral lemma awns present, 60–65 mm long, subequal to principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Northeast Tropical Africa. Somalia.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Zimbabwe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Salisbury, 1440 m.s.m., Moio 1920, *F. Eyles* 2238 (HT: K).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk. leukos, white; phaeos, grey. Panicles pale-colored.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 60–90 cm long. Culm-internodes distally woolly. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs. Leaf-blades curled, 10–20 cm long, 1.5–3 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets lanceolate, suberete, 5–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3 mm long, bearded, truncate.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–8 mm long, 0.9–1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute, mucronate or awned, 1 -awned, awn 0–1.1 mm long. Upper glume lanceolate, 5–8 mm long, 1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, muticous or mucronate.

Florets. Fertile lemma elliptic, suberete, 5–6.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 8–17 mm long limb, with a straight or slightly twisted column, persistent. Column of lemma awn (0.5–)1.5–2.5(–5.5) mm long. Lateral lemma awns present, 7–13 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Frederik Michael Leibmann (1813–56), Danish botanist.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–50 cm long. Leaves mostly basal, distichous. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades flat, 1–2 mm wide. Leaf-blade surface puberulous, hairy adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 8–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute.


Florets. Fertile lemma linear, suberete, 8–9 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading, with 20 mm long limb. Lateral lemma awns present, spreading as much as principal, 20 mm long, subequal to principal.

Flower and Fruit. Anthers 3.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 204, Fig.12 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, robust, 100–200 cm long, 3–4 -noded. Culm-internodes smooth, distally glabrous. Lateral branches ample. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades 15–30 cm long, 2–4 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, linear or lanceolate, 7–30 cm long, 0.5–5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pilose, acute. Floret callus hairs 1.5 mm long.

**Glumes.** Glumes persistent, similar, shorter than spikelet or reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–8 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 7–10 mm long, 0.9–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous or scabrous. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 6–11 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough generally. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 14–23 mm long limb, without a column, persistent. Lateral lemma awns present, 11–20 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp. Hilum linear, 0.5 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. New South Wales, Queensland.

North, Central, South East, Inland, Coast, Tablelands.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations.** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, effuse, 10 cm long. Panicle branches capillary, flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 30–50 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, bearded, 2-toothed.


**Florets.** Fertile lemma elliptic, subterete, 2.5–3.5 mm long, coriaceous, without keel. Lemma surface puberulous, hairy above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 18–25 mm long limb, with a straight or slightly twisted column, persistent. Column of lemma awn 17–22 mm long. Lateral lemma awns present, 18–25 mm long, subequal to principal.

**Distribution (TDWG).** Continent. Africa.
Country /Province /State. West-Central Tropical Africa. DRC.


**TYPE** from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: L.A.G. Bosc s.n., no date, USA: Carolina (P; IT: C, US-2947176 (fragm. ex P)).

**Illustrations (Books):** M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (331 as var. *longespica* & *geniculata*), F.W.Gould, *The Grasses of Texas* (1975) (393, Fig. 208 & 394, Fig. 209 as var. *longespica* & *geniculata*).

**Derivation** (Clifford & Bostock 2007): L. *longus*, long; *spica*, thorn. With long spikelets or inflorescence branches.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Butt sheaths glabrous or pilose. Culms geniculately ascending, 20–60 cm long, wiry. Lateral branches sparse. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades filiform, flat or involute, 0.5–1 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.2 mm long, pubescent, acute.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3–9 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume lanceolate, 3–9 mm long, 0.75–1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex entire or dentate, 3 -fid, acute or acuminate.

**Florets.** Fertile lemma linear, subterete, 4–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn reflexed, with 6–36 mm long limb, without a column. Lateral lemma awns present, spreading as much as principal, 2–25 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Temperate Asia, Australasia, North America.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 209, Fig.14 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–80 cm long, 3 -noded. Culm-internodes glaucous, scaberulous, distally glabrous. Lateral branches ample. Leaf-sheaths striately veined, scaberulous, glabrous on surface. Leaf-sheath oral hairs pubescent or ciliate. Ligule a fringe of hairs, 0.5–1 mm long. Collar pilose. Leaf-blades involute, 9–18 cm long, 2–3 mm wide. Leaf-blade surface pubescent, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, elliptic, 9.5–20 cm long, 3–6 cm wide. Primary panicle branches 0.5–1.7 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.8 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–11 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex acuminate to setaceously acuminate. Upper glume lanceolate, 7–13 mm long, 1.4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate to setaceously acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 5–9.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculate, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 15–25 mm long limb, with a straight or slightly twisted column, persistent. Column of lemma awn 1–5 mm long. Lateral lemma awns present, spreading as much as principal, 15–25 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 4–6.5 mm long. Hilum linear, 0.25 length of caryopsis.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Derivation** (Clifford & Bostock 2007): L. *longus*, long; *seta*, bristle. Glumes or lemmas long awned.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
Habit, Vegetative Morphology. Perennial, caespitose. Culms 10–35 cm long. Leaves mostly basal or basal and cauline. Leaf-sheaths without keel. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades curved or flexuous, involute, 4–15 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear, straight or flexuous, 4–15 cm long, bearing few spikelets. Primary panicle branches ascending or drooping, indistinct the panicle almost racemose or simple. Spikelets solitary. Fertile spikelets sessile. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 16–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5 mm long, pubescent, pungent.

Glumes. Glumes dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–10 mm long, 0.5–0.66 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Upper glume apex acuminate. Upper glume lanceolate, 16–25 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma linear, subterete, 13–15 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 40–100 mm long limb, without a column. Lateral lemma awns present, 40–100 mm long, subequal to principal.

Flower and Fruit. Anthers 3. 

2n = 22 (1 ref TROPICOS).


Country /Province /State. Northwest USA, North-central USA, Southwestern USA, South-central USA, Mexico. New Mexico.


TYPE from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: L. Riedel s.n., s.d., Brazil: Mato Grosso: in umbrosis siccis prope Cuiba (LE-TRIN-1305.06; IT: K, US-81213 (fragm. ex LE)).


Illustrations (Books): S.A.Renvoize, Gramineas de Bolivia (1998) (276, Fig. 56), S.A.Renvoize, The Grasses of Bahia, 1984 (55, Fig. 19), J.A.Steyermark et al, Flora of the Venezuelan Guayana Vol. 8 (2004) (34, Fig. 18).


20–33 mm long limb, without a column. Lateral lemma awns present, ascending, 20–33 mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica, Northern South America, Western South America, Brazil. Belize, Nicaragua. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil North.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations extravaginal or intravaginal. Culms erect, 40–80 cm long. Culm-internodes glaucous, smooth. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs. Leaf-blades flat or convolute, 10–70 cm long, 2–4 mm wide, stiff. Leaf-blade surface smooth or scaberulous, rough adaxially. Leaf-blade apex acute.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 55 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3–4 mm long, pubescent, hairy on the margins, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 45 mm long, 0.8 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex setaceously acuminate. Upper glume lanceolate, 55 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

**Florets.** Fertile lemma linear, subterete, 10–11 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 120 mm long limb. Lateral lemma awns present, 110 mm long, subequal to principal. Palea 2.5 mm long.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus. Hilum linear.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Southern South America. Bolivia. Paraguay.


Illustrations (Journals): *Austr. Syst. Bot.* (5: 192, Fig.10 (1992)).


Habit, Vegetative Morphology. Perennial. Culms 60–100 cm long, 5–9 -noded. Culm-internodes smooth, distally glabrous. Lateral branches sparse. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking or ciliate or bearded. Ligule a fringe of hairs, 0.3 mm long. Collar glabrous. Leaf-blades involute, 15–30 cm long, 1–2.3 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 6–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5–0.8 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–11 mm long, 0.66–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Lower glume apex emarginate, mucronate. Upper glume lanceolate, 6–15 mm long, 1.1–1.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate, mucronate.

Florets. Fertile lemma lanceolate, suberete, 5.5–9.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculate, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 10–29 mm long limb, with a straight or slightly twisted column or with twisted column, persistent. Column of lemma awn 1–8 mm long. Lateral lemma awns present, 9–26 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.


Distribution (TDWG). Continent. Tropical Asia, Australasia.


TYPE from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: *M. Wacket s.n.*, 1902, Brazil: Sco Paulo: prope Pilar laud propul ab urbe Sco Paulo, 750–800 m (W-15557; IT: MO-4014762 (fragm. ex US), US-81206 (fragm. ex W & photo)).


Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illusrata Catarinensis Gramineae* (1981–1982) (476, Fig. 102 as *Aristida kleinii*).


Habit, Vegetative Morphology. Perennial. Culms 50–100 cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded (deciduous). Ligule a fringe of hairs, 0.5–0.8 mm long. Collar glabrous. Leaf-blades flexuous (sometimes erect), flat (lower) or convolute (upper), 15–50(–55) cm long, 0.8 mm wide or 0.5–2.5 mm wide. Leaf-blade surface scabrous, rough adaxially (densely), glabrous or pilose (sometimes), hairless except near base, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antrorsely scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted (or subcontracted), (14–)18–23 cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight, 0.5–0.7 mm long, pilose, acute (subacute).


**Florets.** Fertile lemma subterete, 6–7(–10) mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough generally, with a median groove (ventral,longitudinal). Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight or flexuous, ascending or spreading, pseudo-articulate at base, with 16–20(–24) mm long limb, with twisted column. Column of lemma awn 5–7(–8) mm long. Lateral lemma awns present, ascending or spreading as much as principal, 14–18(–21) mm long, shorter than principal (slightly).

**Distribution (TDWG).** Continent. South America.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 45–60 cm long. Ligule a fringe of hairs. Collar glabrous or pubescent. Leaf-blades flat or involute, 25–45 cm long, 2–3 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 9.5–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9.5–13 mm long, 1–1.05 length of upper glume, coriaceous, without keel. Lower glume apex acuminate. Upper glume lanceolate, 9.5–13 mm long, membranous. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 7–8.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn straight, with 15–20 mm long limb, with twisted column, persistent. Column of lemma awn 3–5 mm long. Lateral lemma awns present, 15–20 mm long, subequal to principal.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Bolivia.


**Accepted by:** U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. margo, border; -alis, pertaining to. The leaf-blades have conspicuously thickened marginal nerves.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 4.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–5.5 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute, awned, 1 -awned, awn 1.5–2.5 mm long. Upper glume lanceolate, 4.5–5.5 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 1 mm long.

Florets. Fertile lemma linear, suberete, 5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck, with this appendage 1–2 mm long, awned, 3 -awned. Principal lemma awn 3-branched, with 15 mm long limb. Lateral lemma awns present, 10 mm long, shorter than principal.


Distribution (TDWG). Continent South America.

Country /Province /State. Northern South America, Western South America, Brazil. Brazil West Central.

Mato Grosso. Mato Grosso.


TYPE from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: F. Sellow s.n., no date, Brazil: Rio Grande (B: IT: HAL, K, US-81198 (fragm. ex B & photo)). US-81199 (fragm. ex B), is Stipa filifolia Nees, but US-81198 (fragm. ex B) is an Aristida, this has led to the misapplication of the name Aristida megapotemica to Stipa filifolia.

Illustrations (Books): S.A.Renvoize, Gramineas de Bolivia (1998) (275, Fig. 55), S.A.Renvoize, The Grasses of Bahia, 1984 (55, Fig. 19), L.B. Smith, D.C. Wasshausen, R.M. Klein Flora Illustrada Catarinensis Gramineas (1981–1982) (507, Fig. 108), B.Rosengurtt, Gramineas Uruguayas (1970) (212, Fig. 87).

Illustrations (Journals): Ruizia (13:233, Fig 26e (1993)).

Derivation (Clifford & Bostock 2007): Gk. megas, large; potamos, river; -ike, belonging to. Mostly from Rio Grande do Sal, now La Platte. Otherwise from the Amazon or Rio Grande, a district in southern Brazil.


Habit, Vegetative Morphology. Perennial. Culms (37–)60–140 cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking or bearded. Ligule a fringe of hairs, 0.5–0.7 mm long. Collar glabrous. Leaf-blades curled (lower) or straight (upper), flat (lower) or convolute (upper), 20–50 cm long, 3–5 mm wide. Leaf-blade surface scabrous, rough on both sides or adaxially, glabrous or pilose, hairless throughout or except near base, moderately hairy, hairy adaxially. Leaf-blade apex acute, antorsely scabrous.

Inflorescence. Inflorescence a panicle. Panicle spiciform, 11–35(-40) cm long.
**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile spikelet with or without additional sterile spikelets. Spikelets one-many-flowered if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, breaking up at maturity, disarticulating below each fertile spikelet. Floret callus elongated, curved, 1–1.8(–2.5) mm long, bearded, acute.


**Florets.** Fertile lemma subterete, (6–)8–12 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous or scaberulous (rarely), rough above (upper 2/3), without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight or flexuous, twisted together or ascending, simple at base, with 25–55 mm long limb, with twisted column. Column of lemma awn (20–)25–60(–95) mm long. Lateral lemma awns present, ascending or wrapped around principal, 22–48 mm long, shorter than principal.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Mesoamerica, Western South America, Brazil, Southern South America. Belize, El Salvador, Honduras, Bolivia, Colombia, Ecuador, Peru, Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Paraguay, Uruguay.

**Aristida mendocina** Phil. Sert. Mend. Alt. 47. (1870).


**TYPE** from Argentina. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: IT: Philippi s.n., 1868–1869, Argentina: Mendoza (CORD, L-908.83–1456, SGO-45628, SGO-37149, US-1939963 (fragm. ex SGO-45628 & photo), US-1126810 ex W, US- (ex SGO-37149 photo)). Chile in the broad sense when these two countries were still one.


**Derivation** (Clifford & Bostock 2007): from Mendoza, Chile.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 100–200 cm long, 2–6 -noded. Lateral branches sparse. Leaf-sheaths mostly shorter than adjacent culm internode. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades curled, flat or convolute, 1–3 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile spikelet with or without additional sterile spikelets. Spikelets one-many-flowered if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–11 mm long, breaking up at maturity, disarticulating below each fertile spikelet. Floret callus evident, pubescent, obtuse.

**Glumes.** Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 7–11 mm long, 2–2.3 length of upper glume, membranous. Lower glume apex acute. Upper glume linear, 3–5 mm long, membranous. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 7–11 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins involute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn straight, with 17–30 mm long limb. Lateral lemma awns present, 14–27 mm long, subequal to principal.

**Flower and Fruit.** Caryopsis with adherent pericarp, fusiform, without sulcus, dark brown.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Western South America, Brazil, Southern South America. Bolivia. Brazil Northeast. Argentina Northeast, Argentina South, Paraguay.

Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, J.F.Veldkamp, Poaceae ms (Flora Malesiana).


**Illustrations**: None found.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 60–120 cm long, 1 mm diam. Lateral branches lacking. Leaf-sheaths scaberulous. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 7–40 cm long, 1–2 mm wide. Leaf-blade surface scaberulous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5 mm long, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 7–8 mm long, 0.66–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Upper glume linear, 10–12 mm long, 1.4–1.7 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex attenuate, awned, 1 -awned, awn 1.5 mm long.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, recurved at base of limb, with 30 mm long limb, with twisted column. Column of lemma awn 12–13 mm long. Lateral lemma awns present, spreading less than principal, 25 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: Tropical Asia.

**Country /Province /State.** Malesia, Papuasia. New Guinea PNG, or West Papua (Irian Jaya). New Guinea.


**Illustrations (Books):** G.V.Pope et al., Flora Zambesiaca 10 (1(1971):121, t. 32), M.A.N.Muller, Grasses of South West Africa/Namibia (1984), G.E.Gibbs Russell el al, Grasses of Southern Africa (1990) (51, Fig. 20).

**Images:** F.van Oudtshoorn, Guide to Grasses of Southern Africa (1999).

**Derivation** (Clifford & Bostock 2007): L. meridies, meridian; -ale, pertaining to. On the same meridian as a related species.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–2 mm long, pilose, 2-toothed.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–7 mm long, 0.5 length of upper glume, scarios, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume margins ciliolate. Lower glume apex emarginate or obtuse. Upper glume lanceolate, 10–15 mm long, 1.4–1.6 length of adjacent fertile lemma, scarios, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid.

**Florets.** Fertile lemma elliptic, subterete, 7–9 mm long, coriaceous, without keel, 3 -veined, 0–3 - veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 40–50 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 5–15(–18) mm long. Lateral lemma awns present, 40–50 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating origin. From Mexico.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 13 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1 -awned, awn 1 mm long. Upper glume linear, 12 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acuminate, awned, 1 -awned, awn 1 mm long.

**Florets.** Fertile lemma lanceolate, subterete, 8–10 mm long, coriaceous, without keel, 3 -veined, 0–3 - veined. Lemma midvein scabrous. Lemma apex acuminate, awned, 3 -awned. Principal lemma awn 3-branched, with 15–17 mm long limb, persistent. Lateral lemma awns present, 15–17 mm long, subequal to principal.

**Distribution (TDWG).** Continent. North America.

Country /Province /State. Mexico. Central Mexico.
Aristida migiurtina


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 9–20 cm long, with 0.1–0.33 of their length below uppermost node. Ligule a fringe of hairs. Leaf-blades curled, involute, 2–15 cm long, 1–2 mm wide. Leaf-blade surface ribbed, pubescent, hairy adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 12–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 0.75–1 mm long, pilose, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–13 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 1–2 mm long. Upper glume linear, 12–22 mm long, 3–4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 1–2 mm long.

Florets. Fertile lemma lanceolate, suberete, 4.5–5.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 65–80 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 15–20 mm long. Lateral lemma awns present, 50–60 mm long, shorter than principal. Palea 0.33 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Aristida minutiflora


Derivation (Clifford & Bostock 2007): L. minutus, very small; flos, flower. Spikelets or florets very small.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 4.5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume linear, 3–5 mm long, 0.66–0.8 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume linear, 4.5–6 mm long, membranous, 1 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

**Florets.** Fertile lemma linear, laterally compressed, 4.5–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn straight, with 7–15 mm long limb. Lateral lemma awns present, 6–13 mm long, shorter than principal. Palea 0.75–1 mm long.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, linear, without sulcus, 4–6 mm long, light brown. Hilum curved.

**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Southern South America. Argentina Northeast.
Catamarca, Mendoza, Santiago del Estero. Cordoba, La Pampa.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, slender, 40–60 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades flat or involute, 10–15 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially, pilose, hairy adaxially. Leaf-blade margins cartilaginous.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 15–30 cm long. Primary panicle branches indistinct the panicle almost racemose. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 2–3 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, pungent.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 10 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume linear, 10 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute, mucronate.

**Florets.** Fertile lemma linear, suberete, 8 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn recurved at base of limb, with 15–20 mm long limb. Lateral lemma awns present, spreading as much as principal, 15–20 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.


**TYPE** from Botswana. **T:** fide TROPICOS and Kew Synonomy Database: HT: *Schultze* 342, Jan 1905, Botswana: between Senuma (Sekoma?) and Kooa (Kooi?) (B; IT: PRE).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *mollis*, soft; *-issima*, most. Plant in whole or in part densely covered with soft hairs.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths pubescent or woolly. Culms 60–90 cm long. Culm-internodes distally pubescent or woolly. Leaf-sheath oral hairs woolly. Ligule a fringe of hairs. Leaf-blades filiform or linear, 20–30 cm long, 1–3 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 12–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–2.5 mm long, pilose, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–10 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 1–5 mm long. Upper glume lanceolate, 12–20 mm long, 1.5–2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 1–5 mm long.

**Florets.** Fertile lemma lanceolate, suberete, 8–10 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 28–55 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 12–27 mm long. Lateral lemma awns present, 28–55 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: Africa.


**TYPE** from South Africa. **T:** fide TROPICOS and Kew Synonomy Database: HT: *Mogg H* 20634, 20 Apr 1919, South Africa: Natal: Mount Aux Sources (K; IT: PRE).

**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6–8.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–8.5 mm long, 1.2–1.4 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 5–6 mm long, 0.9–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

**Florets.** Fertile lemma linear, subterete, 6–6.5 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex rostrate, awned, 3 -awned. Principal lemma awn straight or 3-branched, with 18 mm long limb, without a column or with twisted column, persistent. Lower lemma awns present, 13 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Southern Africa. Free State, Kwazulu-Natal.


**Illustrations (Books):** J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (33, Fig. 17).

**Derivation (Clifford & Bostock 2007):** in honor of Moritz (-) who collected in Venezuela.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–50 cm long. Culm-internodes smooth or scaberulous. Lateral branches sparse. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades conduplicate or involute, 15–20 cm long, 1–2 mm wide, glaucous. Leaf-blade surface scabrous, rough adaxially, pubescent, hairy adaxially. Leaf-blade margins cartilaginous. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 11–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, bearded, acute.


**Florets.** Fertile lemma linear, subterete, 8–9 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 30–35 mm long limb. Lateral lemma awns present, 30–35 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America, Western South America. Venezuela. Colombia.


Illustrations: None found.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal or intravaginal. Culms erect, 25–30 cm long, 2–4 -noded. Culm-nodes glabrous. Lateral branches fastigiate, arising from lower culm or mid culm. Leaf-sheaths smooth, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Collar glabrous. Leaf-blades filiform, convolute, 2–12 cm long, 0.4–0.5 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially. Leaf-blade margins scaberulous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 9–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75 mm long, pubescent, obtuse.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 6–9 mm long, 0.66 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, mucronate. Upper glume linear, 9–12 mm long, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

Florets. Fertile lemma linear, suberete, 8–10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn straight, with 8–20 mm long limb. Lateral lemma awns present, gyrate, 6–18 mm long, shorter than principal. Palea 1 mm long.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus, 8–8.5 mm long, dark brown. Hilum linear.

Distribution (TDWG). Continent. South America.
Country /Province /State. Southern South America. Argentina Northeast.


Illustrations (Journals): Austr. Syst. Bot. (5: 182, Fig.8 (1992)).

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 50–90 cm long. Culm-internodes smooth, distally glabrous. Lateral branches sparse. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs pubescent or ciliate. Ligule a fringe of hairs, 1 mm long. Collar glabrous or pubescent. Leaf-blades involute, 9–19 cm long, 1–2 mm wide. Leaf-blade surface scaberulous, rough adaxially or on both sides.
Inflorescence. Inflorescence a panicle. Panicle contracted or spiciform, linear, 17–30 cm long, 1–8 cm wide. Primary panicle branches 2.5–10 cm long, naked below or bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, 8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.3 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–12 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 8–12 mm long, 1.1–1.4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface smooth to scabrous. Upper glume apex emarginate or obtuse or acute or acuminate.

Florets. Fertile lemma lanceolate, subterete, 7.5–8.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculate, rough above. Lemma margins involute, covering most of palea, scabrous. Lemma apex acute, awned, 3 -awned. Principal lemma awn subterete below or flat below, with 17–30 mm long limb, without a column, persistent. Lateral lemma awns present, 15–28 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.


*Aristida murina* Cav. Ic. 5: 44. t. 469. (1799).


Habit, Vegetative Morphology. Perennial. Culms 25–50(–76) cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking or bearded (deciduous). Ligule a fringe of hairs, 0.3 mm long. Collar glabrous. Leaf-blades straight or curved, conduplicate, 10–25(–30) cm long. 1.5–3 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, 9–15(–18) cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.8–1 mm long, pilose, acute (or subacute).


Florets. Fertile lemma laterally compressed (slightly), 13–15(–17) mm long, keeled, lightly keeled, keeled above, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma surface smooth, without
grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 55–105 mm long limb, without a column. Lateral lemma awns present, ascending, 55–105 mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil, Southern South America. Brazil Southeast. Argentina Northeast, Uruguay.


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online, U.Quattrocchi, CRC World Dictionary of Grasses (2006); N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).


**Derivation** (Clifford & Bostock 2007): L. changeable. Variable in accord with the season or habitat.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms (10–)30–70 cm long. Culm-internodes distally glabrous. Leaf-sheath oral hairs lacking or bearded. Ligule a fringe of hairs. Leaf-blades flat or convolute, 6–14 cm long, 1–2 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, lanceolate or ovate, 10–20 cm long, with spikelets clustered towards branch tips. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, pilose, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–5 mm long, 0.7–1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 6–7 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume muticous or mucronate.

**Florets.** Fertile lemma lanceolate, subterete, 4–5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 10–30 mm long limb, with twisted column, deciduous, abscissing from top of column, limb scabrous. Column of lemma awn 2–5 mm long. Lateral lemma awns present, 10–30 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

n = 11 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia, Tropical Asia.


Punjab, Rajasthan, Tamilnadu.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. negligo, disregard. Often a segregate from another species with which confusion is likely.


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms ere ct, 40–60 cm long, wiry. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.2–0.5 mm long. Leaf-blades filiform, involute, 2–5 cm long, 0.5–1 mm wide, stiff. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex pungent.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, obtuse.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume linear, 7–9 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate or setaceously acuminate. Upper glume linear, 7–9 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acuminate or setaceously acuminate.

Florets. Fertile lemma linear, subterete, 10 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 10–15 mm long limb, with twisted column. Column of lemma awn 3–4 mm long. Lateral lemma awns present, spreading less than principal, 10–15 mm long, subequal to principal.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country/Province/State. Caribbean. Cuba, Dominican Republic, Haiti.


Accepted by: W.D. Clayton & K. Harman, GrassBase (2008) and online.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–100 cm long, 4 -noded. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades curled, 10–20 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins cartilaginous, scabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, bearded, obtuse.
**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.5–8 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex emarginate or obtuse, mucronate. Upper glume lanceolate, 8–11 mm long, 1–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate or truncate, mucronate.

**Florets.** Fertile lemma elliptic, subterete, 7–11 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness or scaberulous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 9–15 mm long limb, persistent. Lateral lemma awns present, 7–13 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** South Tropical Africa and Southern Africa. Angola.


**Illustrations (Journals):** *Darwiniana* (41: 176, fig.8 (2003)).

**Derivation** (Clifford & Bostock 2007): in honor of Elisa Gernaela Nicora de Panza (1912-) Argentinian botanist.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit.** Perennial. Rhizomes short. Culms erect, 70–110 cm long, 6–9 -noded, disarticulating at the nodes. Culm-internodes terete, solid, distally glabrous. Lateral branches ample. Leaf-sheaths striately veined, smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate, 2–3 mm long. Ligule a fringe of hairs, 0.5–0.6 mm long. Leaf-blades straight or curved, convolute, 2–20 cm long, 0.5–2 mm wide. Leaf-blade venation prominent. Leaf-blade surface scaberulous, rough adaxially or on both sides. Leaf-blade margins scaberulous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6.5–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–0.6 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–13 mm long, 0.75–1.1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex entire or dentate, 2 -fid, acute, muticous or mucronate. Upper glume lanceolate, 8–13 mm long, 1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

**Florets.** Fertile lemma linear, subterete, 8.5–11 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn straight, with 10–22 mm long limb. Lateral lemma awns present, ascending, 8.5–18 mm long, shorter than principal. Palea 1.3–1.7 mm long, 2 -veined. Palea apex entire or dentate, 2 -fid.

**Flower and Fruit.** Lodicules 2, 1.2–1.5 mm long. Anthers 3, 1.5–2.5 mm long. Caryopsis with adherent pericarp, fusiform, without sulcus, 6.5–9 mm long, dark brown. Embryo 0.33–0.5 length of caryopsis. Hilum linear, 1 length of caryopsis.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Southern South America. Argentina Northeast. Jujuy, Salta, Tucuman.


**Illustrations (Books):** A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (213, Fig 77).

**Derivation** (Clifford & Bostock 2007): in honor of Gustav Niederlein (1858–1924) German botanist.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations intravaginal, flabellate. Culms erect, 11–24 cm long, 1–2 -noded. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths wider than blade at the collar, scaberulous. Leaf-sheath oral hairs bearded, deciduous, 2.5–3.5 mm long. Ligule a fringe of hairs. Collar glabrous. Leaf-blades filiform, convolute, 13.5–33 cm long, 0.5 mm wide, stiff. Leaf-blade surface ribbed, scabrous, rough on both sides. Leaf-blade margins scaberulous. Leaf-blade apex pungent.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 28–40 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 15–25 mm long, 0.5–0.66 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface smooth or asperulous, rough above. Lower glume apex acute, awned, 1 -awned, awn 2–4 mm long. Upper glume linear, 24–40 mm long, membranous, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 4–8 mm long.

**Florets.** Fertile lemma linear, subterete, 12.5–14 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness or scaberulous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn straight, with 105–145 mm long limb. Lateral lemma awns present, 95–136 mm long, shorter than principal. Palea 1.5 mm long.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus, 9–10 mm long, light brown. Hilum linear.


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Aristida novae-caledoniae


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from New Caledonia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database:


Illustrations: None found.

Derivation (Clifford & Bostock 2007): From New Caledonia.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6.3–10.6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.3–1 mm long, pubescent, acute.


Florets. Fertile lemma lanceolate, subterete, 6–10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculate, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn spreading, flat below, with 8–27 mm long limb, without a column, persistent. Lateral lemma awns present, spreading as much as principal, 7–24 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3, 1.1–1.4 mm long. Caryopsis with adherent pericarp, 4.6–6 mm long. Hilum linear, 0.5 length of caryopsis.


Country /Province /State. Australia. New South Wales, Northern Territory, Queensland, South Australia, Western Australia.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, reflexed, with 15 mm long limb, with a straight or slightly twisted column, persistent. Column of lemma awn 3 mm long. Lateral lemma awns present, spreading less than principal, 10 mm long, shorter than principal. Palea 0.1 length of lemma.

**Flower and Fruit.** Anthers 3.


**Accepted by:** J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 209, Fig.14 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 25–40 cm long. Culm-internodes smooth, distally pubescent. Lateral branches ample. Leaf-sheaths antorsely scabrous, pubescent. Leaf-sheath oral hairs bearded, 3 mm long. Ligule a fringe of hairs, 0.5 mm long. Collar pilose. Leaf-blades 10–25 cm long, 2–3 mm wide. Leaf-blade surface scabrous, rough adaxially, pubescent, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 13–21 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–15 mm long, 0.4–0.7 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous or scabrous. Lower glume apex acute or acuminate, awned, 1 -awned, awn 1–3 mm long. Upper glume lanceolate, 13–21 mm long, 1.5–1.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper
glume surface asperulous or scabrous. Upper glume apex acute or acuminate, awned, 1-awned, awn 1–3 mm long.

**Florets.** Fertile lemma lanceolate, subterete, 11–14 mm long, coriaceous, purple, without keel, 3-veined, 0–3 -veined. Lemma surface scabrous, rough generally. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 15–40 mm long limb, without a column, persistent. Lateral lemma awns present, 23–38 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 6–10 mm long. Hilum linear, 0.5 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

Country /Province /State. Australia. New South Wales, Northern Territory, Queensland, South Australia, Western Australia.

Eremean. Central Australia. NW & Lake Eyre. South East, Inland. Western Slopes, Western Plains.


**TYPE** from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Michaux s.n., In apricis pratensisibus regionis Illinoiensium, route de Illinois au fort Massar, lieuex alternatium submergen (P; IT: US-81184 (fragm. ex P & photo)).


**Derivation** (Clifford & Bostock 2007): Gk. oligos, few; anthos, flower. Inflorescence of few spikelets.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 15–88 cm long, wiry. Culm-innernodes distally glabrous. Lateral branches ample. Leaf-sheaths without keel, glabrous on surface. Leaf-sheath oral hairs lacking or pubescent. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades filiform, 10–25 cm long, 1–2 mm wide. Leaf-blade surface glabrous or hirsute, sparsely hairy. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 18–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 18–25 mm long, 1 length of upper glume, membranous, 3–7 -veined. Lower glume apex acuminate, muticous or awned, 1 -awned, awn 0.5 mm long. Upper glume lanceolate, 18–25 mm long, 1.1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, acute, 1 -awned, awn 10–15 mm long.

**Florets.** Fertile lemma linear, subterete, 16–28 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 30–70 mm long limb, without a column. Lateral lemma awns present, spreading as much as principal, 30–70 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Europe (*), North America.

Region. Northern Europe (*).

Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk. *oligos*, few; *spira*, spiral. Column of awn with few twists.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 70–110(–140) cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs or a ciliolate membrane (rarely), 0.2 mm long. Collar glabrous. Leaf-blades straight, conduplicate, 30–80 cm long, 3–4 mm wide. Leaf-blade surface scabrous (densely), rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, 13–27 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight, 0.2–0.3 mm long, pilose, obtuse.


**Florets.** Fertile lemma subterete, 6–7 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface papillose, rough above, with a median groove (ventral, longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn flexuous, reflexed or twisted together, simple at base, with 22–32 mm long limb, with twisted column. Column of lemma awn 7–12 mm long. Lateral lemma awns present, wrapped around principal (or reflexed), 19–27 mm long, shorter than principal.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Brazil. Southern South America. Brazil Northeast, Brazil Southeast. Paraguay.

**Aristida pallens** Cav. *Ic.* 5: 43. t. 468. (1799).


**Type** from Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: L. Nee s.n., Jan, Chile: Cuchu-Cuchu (MA; IT: US-81176 (fragm. ex MA)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 28–50 cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking or scanty. Ligule an eciliate membrane, 0.6–0.8 mm long. Collar glabrous. Leaf-blades straight, convolute, 8–14(–16) cm long, 0.5–0.9 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, hairless except near base, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open (erect,subcontracted), 14–16(–20) cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight, 0.4–0.5(–0.6) mm long, pilose, obtuse.


**Florets.** Fertile lemma subterete, 11–12 mm long, without keel, rounded except near apex, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 65–100 mm long limb, without a column. Lateral lemma awns present, ascending, 65–100 mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

- **Country /Province /State.** Western South America, Brazil, Southern South America, Colombia.

Aristida palustris (Chapm.) Vasey. Cat. Gram. U. St. 35. (1885).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Culms erect, 100–150 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Ligule a fringe of hairs. Leaf-blades flat, 15–30 cm long, 2–3 mm wide. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade apex attenuate, filiform.

**Inflorescence.** Inflorescence a panicle. Panicle open (erect,subcontracted), 25–50 cm long. Primary panicle branches appressed, 5–10 cm long, naked below or bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 12 mm long, 1 length of upper glume, membranous, 2 -veined. Lower glume primary vein scabrous. Lower glume surface scabrous. Lower glume apex acute, mucronate. Upper glume linear, 12 mm long,

**Florets.** Fertile lemma linear, subterete, 8 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck, with this appendage 1 mm long, awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 15–30 mm long limb. Lateral lemma awns present, spreading less than principal, 10–25 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

Country /Province /State. South-central USA, Southeastern USA. Texas. Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, South Carolina.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths glabrous or pubescent. Culms erect, 20–50 cm long, wiry. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades flat or involute, 5–15 cm long, 0.7–1.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pubescent, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear or lanceolate, 10–20 cm long. Primary panicle branches appressed or ascending, 2–8 cm long. Panicle branches with insignificant pulvini. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–7 mm long, 0.6–0.75 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 7–12 mm long, 1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 7–12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, ascending or spreading, with 10–20 mm long limb, with a straight or slightly twisted column. Column of lemma awn 2 mm long. Lateral lemma awns present, spreading as much as principal, 10–20 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

Country /Province /State. Southwestern USA, South-central USA, and Mexico. Arizona. New Mexico. Central Mexico, Northeast Mexico, Southwest Mexico, Southeast Mexico.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–40 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades flat or convolute, 5–20 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, lanceolate or ovate, 8–15 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1 mm long, pilose, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–5(–6) mm long, 0.4 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex lobed, 2 -fid, obtuse, mucronate. Upper glume linear, 10–12 mm long, 2–2.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex lobed, 2 -fid, mucronate.

Florets. Fertile lemma lanceolate, subterete, 4–6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 35–50 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 8–15 mm long. Lateral lemma awns present, 30–40 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, J.F.Veldkamp, Poaceae ms (Flora Malesiana).


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Papua, now Papua New Guinea.


Habit, Vegetative Morphology. Perennial. Culms 25–45 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades 7–12.5 cm long, 0.5–1.7 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 10–13 cm long, 4 cm wide, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1–1.5 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–7 mm long, 0.6–0.7 length of upper glume, membranous, 1-keeled, 1(–3) -veined. Lower glume lateral veins absent. Lower glume apex acute, mucronate or awned, 1 -awned, awn 0.5–1 mm long. Upper glume lanceolate, 10–12 mm long, 1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, mucronate or awned, 1 -awned, awn 0.8–2 mm long.
**Florets.** Fertile lemma lanceolate, subterete, 6–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma aavn 3-branched, with 30 mm long limb, with twisted column, persistent. Column of lemma aavn 5.5–8 mm long. Lateral lemma awns present, 30 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3, 1.25 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Tropical Asia.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–60 cm long. Lateral branches lacking. Leaves basal and cauline. Ligule a fringe of hairs. Leaf-blades involute, 10–20 cm long, 1–4 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 12–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 8–16 mm long, 0.5–0.66 length of upper glume, membranous. Lower glume primary vein scabrous. Lower glume apex entire or dentate, 2 -fid, acute, awned, 1 -awned. Upper glume linear, 12–18 mm long, membranous. Upper glume primary vein smooth. Upper glume apex entire or dentate, 2 -fid, acute, awned, 1 -awned.

**Florets.** Fertile lemma linear, subterete, 12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 15–35 mm long limb, with a straight or slightly twisted column. Column of lemma awn 10–15 mm long. Lateral lemma awns present, spreading as much as principal, 15–35 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.
Country/Province/State. Southwestern USA. California.


**TYPE** from Argentina. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: S. Venturi 1129, Mar 1917, Argentina: Tucuman (L-925.70–84; IT: BAA, US-81171 (fragm. ex L)).


**Illustrations (Journals):** *Darwiniana* (41: 179, fig.9 (2003)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs. Leaf-blades convolute, 20–30 cm long, 2 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade margins smooth. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–8.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, truncate.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7 mm long, 0.9 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 8–8.5 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma linear, laterally compressed, 8–8.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface granulose. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck, awned, 3 -awned. Principal lemma awn 3-branched, with 14 mm long limb. Lateral lemma awns present, 10–11 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus. Hilum linear.


**Illustrations (Books):** L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (290, Fig 261 as *Stipa*).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending or decumbent, 6–40 cm long, wiry. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse or ample. Leaf-sheaths outer margin hairy. Ligule a fringe of hairs. Leaf-blades flat or convolute, 6–12 cm long, 1–2 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6.5–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, hairy in a ring above, truncate. Floret callus hairs 0.5 length of lemma.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–5.5 mm long, 0.66–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 2 mm long. Upper glume lanceolate, 6.5–7.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 2 mm long.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 1 -awned. Principal lemma awn geniculate, with 6–9 mm long limb, with
twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 5 mm long. Lateral lemma awns absent. Palea oblong, 1 mm long, 0.15 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Lodicules 2, lanceolate, 1.5 mm long, fleshy, veined. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp, linear. Embryo 0.5 length of caryopsis. Hilum linear.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Southern Africa. Namibia, Northern Cape.


**Derivation (Clifford & Bostock 2007):** L. outspread. Inflorescence an open panicle.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or short. Culms erect, 50–100 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades flat or involute, 25–50 cm long, 2–4 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 20–35 cm long, 0.33–0.5 of culm length, with spikelets clustered towards branch tips. Primary panicle branches drooping, 1–2 -nate, rebranched at middle, 10–20 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.


**Florets.** Fertile lemma linear, suberete, 10–12 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn ascending, with 20–25 mm long limb. Lateral lemma awns present, ascending, 5–10 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southeastern USA. Florida.


**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** L. ensis, denoting origin. From Depto. San Pedro, Argentina.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, robust, 80–130 cm long, 2.5–3 mm diam., 4–5 -noded. Culm-internodes similar in length, distally glabrous. Culm-nodes swollen. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, scaberulous. Leaf-sheath oral hairs scanty or lacking. Ligule a fringe of hairs. Leaf-blades involute, 40–60 cm long, 2–3 mm wide. Leaf-blade
venation with 6 secondary veins. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins cartilaginous. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 12–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 10 mm long, 0.75 length of upper glume, membranous, 1 -veined. Lower glume primary vein ciliolate. Lower glume lateral veins absent. Lower glume surface pubescent, hairy in lines. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 3–4 mm long. Upper glume linear, 12–14 mm long, 3–4 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 4–5 mm long.

Florets. Fertile lemma linear, subterete, 3–4 mm long, coriaceous, without keel, 3 -awned, 0–3 -awned. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 30 mm long limb, with twisted column. Column of lemma awn 10 mm long. Lower lemma awns present, 30 mm long, subequal to principal. Palea hyaline, 0 -veined.


Distibution (TDWG). Continent. South America.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. pendulus, hanging down. Spikelets or inflorescence branches pendant.


Habit, Vegetative Morphology. Perennial. Culms 100–120(–150) cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded (hairs extending to an initial collar). Ligule a fringe of hairs, 1–1.5 mm long. Collar glabrous. Leaf-blades straight or flexuous (slightly), flat (lower) or convolute (upper), 18–43(–50) cm long, 3–3.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrosely scabrous.

Inflorescence. Inflorescence a panicle. Panicle open, 30–35 cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 1 mm long, bearded, acute.


Florets. Fertile lemma subterete, 9–11 mm long, without keel, rounded throughout, 3 -awned, 0–3 -awned. Lemma surface smooth, with a median groove (ventral,longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with (19–)20–27 mm long limb, with twisted column. Column of lemma awn (1.5–)2–3 mm long. Lateral lemma awns present, ascending, (15–)19–25 mm long, subequal to principal.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Penne (pre 1908).

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 2–20 cm long. Ligule a fringe of hairs. Leaf-blades aciculate, involute, 1–10 cm long, 1–2 mm wide, glaucous. Leaf-blade surface ribbed.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9–10.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.2 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6.5–7.5 mm long, 0.7 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, muticous or awned, 1 -awned, awn 0–1 mm long. Upper glume linear, 9–10.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 1–2 mm long.

**Florets.** Fertile lemma lanceolate, subterete, 8–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scabrous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, flat below, with 17–27 mm long limb, without a column, persistent. Lateral lemma awns present, 17–27 mm long, subequal to principal. Palea 0.25 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.


**TYPE** from Australia. T:*Type of Basionym:* fide TROPICOS and Kew Synonomy Database: HT: K. Domin s.n., Feb 1910, Australia: Queensland: Cook District: Eucalyptus-Walder bei Mareeba (L (photo, BRI); IT: BRI).


**Illustrations (Journals):** *Austr. Syst. Bot.*. (5: 165, Fig.4 (1992)).

**Derivation** (Clifford & Bostock 2007): L. per, very; noxius, harmful; -osa, abundance. Callus very sharp and readily entangling in wool and clothing.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 40–137 cm long, 1–2 -noded. Culm-internodes smooth, distally glabrous. Lateral branches lacking or sparse. Leaf-sheaths smooth or scaberulous, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate, 0.5–2 mm long. Ligule a fringe of hairs, 0.3 mm long. Leaf-blades curled or flexuous, conduplicate or involute, 10–20 cm long, 2–3 mm wide. Leaf-blade surface scaberulous.
Inflorescence. Inflorescence a panicle. Panicle contracted or spiciform, linear, 15–39 cm long, 1–1.5 cm wide. Primary panicle branches 2-nate, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 11–18.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.8–1.1 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 11–16 mm long, 0.9–1 length of upper glume, membranous, 1-keeled, 5 -veined. Lower glume primary vein scabrous. Lower glume apex acute or acuminate, awned, 1 -awned, awn 8 mm long. Upper glume lanceolate, 11–18.3 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface glabrous or pubescent. Upper glume apex acute or acuminate, awned, 1 -awned, awn 8 mm long.

Florets. Fertile lemma lanceolate, subterete, 7–14 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above. Lemma margins involute, covering most of palea, without distinctive roughness. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 16–34 mm long limb, with twisted column, persistent. Column of lemma awn 5–10 mm long. Lateral lemma awns present, 13–30 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3, 0.9–1.3 mm long. Caryopsis with adherent pericarp, sulcate on hilar side, 5.4–7.6 mm long. Hilum linear, 0.4 length of caryopsis.


Illustrations (Journals): Austr. Syst. Bot. (5: 197, Fig.11 (1992)).

Derivation (Clifford & Bostock 2007): L. masked, that is, resembling something else. Readily confused with another species.


Habit, Vegetative Morphology. Perennial, caespitose. Culms robust, 60–120 cm long. Culm-internodes smooth, distally glabrous. Lateral branches fastigate. Leaf-sheath oral hairs lacking or ciliate. Ligule a fringe of hairs, 0.5–1 mm long. Collar glabrous. Leaf-blades involute, 8–16 cm long, 1–2.5 mm wide. Leaf-blade surface scabrous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 10–30 cm long, 1–2 cm wide. Primary panicle branches 2–5 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9.5–11.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–11.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute to setaceously acuminate. Upper glume lanceolate, 6–11.5 mm long, 0.6–1 length of adjacent fertile lemma,

**Florets.** Fertile lemma lanceolate, subterete, 9.5–10.5 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness to scabrous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 12–25 mm long limb, without a column, persistent. Lateral lemma awns present, 13–23 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 6–8.5 mm long. Hilum linear, 0.5 length of caryopsis.


**Type** from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Oaxaca: 7.7 km NW of Tlaxiaco on road to San Juan Mixtepec, steep slopes with Pinus, Quercus, and Arbutus, elev. 2020 m. 2 Sep 1990, P.M. Peterson & A. Campos-Villanueva 9731 (HT: NMCR; IT: ANSM, US).

**Illustrations (Journals):** *Novon* (5:210, Fig.1 (1995)).

**Derivation** (Clifford & Bostock 2007): in honor of Paul M. Peterson (b 1923), United States agrostologist.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–100 cm long. Culm-internodes terete, striate, distally glabrous. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, without keel, striately veined, woolly. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades flat or conduplicate, 15–30 cm long, 2–2.5 mm wide. Leaf-blade margins cartilaginous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 20–30 cm long. Primary panicle branches appressed, 1–2 -nate, 6–12 cm long, bearing 4–8 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 9–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 5 mm long, pubescent.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–13 mm long, 1.5–2 length of upper glume, membranous, light brown or purple, 1 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 6–7 mm long, 1.7–2 length of adjacent fertile lemma, membranous, light brown or purple, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 3–4 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned or 3 -awned. Principal lemma awn geniculate or 3-branched, with 7–9 mm long limb, with twisted column. Column of lemma awn 4–6 mm long. Lateral lemma awns absent or present, 0.1 mm long, shorter than principal. Palea 1–1.5 mm long, hyaline, 2-keeled.

**Flower and Fruit.** Lodicules 2, 1–1.5 mm long. Anthers 3. Caryopsis with adherent pericarp, fusiform, 4.5–5.5 mm long, dark brown.


**TYPE** from Namibia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: M.K. Dinter 2938, 4 Apr 1913, Namibia: Omaheke (L-925.70–72; IT: B, PRE).


**Derivation** (Clifford & Bostock 2007): in honor of Robert Knud Friedrich Pilger (1876–1953) German agrostologist, born on Helgoland before its transfer from British to German administration.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 70–150 cm long, 3–6 -noded. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades 20–35 cm long, 1–2 mm wide. Leaf-blade surface ribbed, scaberulous, rough abaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, bearded, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–7 mm long, 0.6–0.7 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scaberulous. Lower glume surface asperulous. Lower glume apex acute, awned, 1 -awned, awn 1.5–2 mm long. Upper glume lanceolate, 10 mm long, 1.4–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 2 mm long.

**Florets.** Fertile lemma elliptic, subterete, 6–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface punctate. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 10–20 mm long limb, with a straight or slightly twisted column, deciduous, abscissing from top of column. Column of lemma awn 1.5 mm long. Lateral lemma awns present, 10–20 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.


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**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

**TYPE** from New Caledonia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: IT: Labillardihre s.n., New Caledonia (P).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *pilus*, a hair; -osa, abundance. The whole plant or any of its organs invested with long spreading hairs.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 60–70 cm long. Culm-internodes distally pubescent. Culm-nodes swollen. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blades curved, filiform, convolute, 10–20 cm long, 1 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.
**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 6.5 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate, awned, 1 -awned, awn 4 mm long. Upper glume lanceolate, 7.5 mm long, 0.9 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fidd, awned, 1 -awned, awn 1 mm long.

**Florets.** Fertile lemma linear, subterete, 8.5 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface punctate. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 8–9 mm long limb, without a column, persistent. Lateral lemma awns present, spreading less than principal, 4.5–5 mm long, shorter than principal. Palea 0.1 length of lemma.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: Pacific.

**Country /Province /State.** Southwestern Pacific. New Caledonia.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. folium*, leaf. The leaf-blades resemble those of *Pinus*.


**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Caribbean. Cuba.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms erect, 15–30 cm long, 0.5 mm diam. Culm-internodes glaucous. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, smooth. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 6–7 cm long, 0.5–1 mm wide. Leaf-blade surface scabrous, puberulous, hairy adaxially. Leaf-blade margins ciliate. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse or acute.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5 mm long, 0.75 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fidd, acute, mucronate. Upper glume lanceolate, 6.5 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fidd, acute, mucronate.
Florets. Fertile lemma linear, subterete, 7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 18–20 mm long limb. Lateral lemma awns present, 18–20 mm long, subequal to principal.


Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America. Venezuela, Colombia.


Illustrations (Journals): Austr. Syst. Bot. (5: 216, Fig.16 (1992)).


Habit, Vegetative Morphology. Perennial, caespitose. Culms 15–50 cm long, 1–2 -noded. Culm-internodes smooth, distally glabrous. Leaf-sheaths striately veined. Leaf-sheath oral hairs bearded, 3 mm long. Ligule a fringe of hairs, 1 mm long. Collar glabrous. Leaf-blades curled or flexuous, flat, 4–8 cm long, 1–1.5 mm wide. Leaf-blade surface scaberulous, rough adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floral callus elongated, pubescent, acute.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–7 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scaberulous. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume lanceolate, 5–7 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

Florets. Fertile lemma lanceolate, subterete, 5–6 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculate, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 12–18 mm long limb, without a column, persistent. Lateral lemma awns present, 12–18 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, 3 mm long. Hilum linear, 0.5 length of caryopsis.


Country /Province /State. Australia. New South Wales, Queensland. South East, Inland. Western Slopes, Western Plains.


Derivation (Clifford & Bostock 2007): Gk. polys, several; klados, branch. Plants with much branched culms often with the branches in fascicles.


Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, 29–40 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths scaberulous, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate, 0.5–1 mm long. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades filiform, involute, 8–11 cm long, 0.5–1.8 mm wide. Leaf-blade surface scabrous, rough on both sides, pilose, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 7–19 cm long, 8 cm wide. Primary panicle branches 3 -nate, 1–3.5 cm long. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 17–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.2–1.7 mm long, pubescent, pungent. Floret callus hairs 0.5–1 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 17–30 mm long, 1.3–1.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous or pubescent. Lower glume apex emarginate or obtuse, awned, 1 -awned, awn 2–4 mm long. Upper glume lanceolate, 13–20 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface glabrous or pubescent. Upper glume apex emarginate or obtuse, awned, 1 -awned, awn 1–2 mm long.

Florets. Fertile lemma lanceolate, subterete, 7–8 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface tuberculate, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 32–76 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 15–35 mm long. Lateral lemma awns present, 26–70 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3, 0.7 mm long. Caryopsis with adherent pericarp, 3.7–5.6 mm long. Hilum linear, 0.5–0.6 length of caryopsis.

Distribution (TDWG). Continent. Tropical Asia, Australasia.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 30–50 cm long. Lateral branches sparse. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs scanty. Ligule a fringe of hairs. Leaf-blades curved or flexuous, involute, 5–10 cm long, 0.5–1 mm wide. Leaf-blade surface hirsute, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 3–8 cm long, contracted about primary branches. Primary panicle branches ascending or spreading, 2–4 cm long, bearing spikelets almost to the base. Panicle branches stiff. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.
**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.75 mm long, pubescent, pungent.

**Glumes.** Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume linear, 7 mm long, 0.7 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex setaceously acuminate. Upper glume linear, 10 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume surface scabrous. Upper glume apex setaceously acuminate.

**Florets.** Fertile lemma linear, subterete, 12 mm long, coriaceous, 3 -awned, 0–3 -awned. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading, with 20–30 mm long limb, with a straight or slightly twisted column. Column of lemma awn 2–3 mm long. Lateral lemma awns present, spreading less than principal, 20–30 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: South America.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 60–80 cm long, wiry. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades flexuous, involute, 30–60 cm long, 1–2 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 15–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, obtuse.

**Glumes.** Glumes lower deciduous, upper persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume linear, 10–12 mm long, 1–1.05 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume linear, 10–12 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 15–17 mm long, coriaceous, 3 -awned, 0–3 -awned. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading, with 20–30 mm long limb. Lateral lemma awns present, spreading less than principal, 10–15 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: South America.
Country /Province /State: Caribbean. Cuba.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 20–40 cm long. Ligule a fringe of hairs. Leaf-blades filiform, involute, 15–25 cm long, 1–2 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 20–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or lanceolate, 12–14 mm long, 0.6 length of upper glume, membranaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex setaceously acuminate. Upper glume linear or lanceolate, 20–25 mm long, 4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, caudate, awned, 1 -awned, awn 5–10 mm long.

Florets. Fertile lemma lanceolate, subterete, 5–6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 80–90 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 6–8.5 mm long. Lateral lemma awns present, 80–90 mm long, subequal to principal. Palea without keels.

Flower and Fruit. Lodicules 2, oblanceolate, 1.5 mm long, membranous, veined, acute. Anthers 3. Caryopsis with adherent pericarp, linear, 5 mm long.


Illustrations (Journals): Austr. Syst. Bot. (5: 168, Fig.5 (1992)).


Derivation (Clifford & Bostock 2007): L. bluish-green. Leaf-blades are covered with short white hairs.


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 60–153 cm long. Culm-internodes glaucous, smooth, distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths longer than adjacent culm internode, smooth, glabrous on surface. Leaf-sheath oral hairs lacking or ciliate, 1–2 mm long. Ligule a fringe of hairs, 0.5–1 mm long. Collar glabrous or pubescent. Leaf-blades straight or flexuous, 20–40 cm long, 2–4.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pubescent, hairy adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets lanceolate, suberete, 10–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–25 mm long, 1.3–1.7 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 7.6–15 mm long, 1.1–1.4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex marginate to acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 5.4–13.5 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scabrous, rough above. Lemma margins involute, covering most of palea, scabrous. Lemma apex acute, awned, 3 -awned. Principal lemma awn flat below, with 14–48 mm long limb, without a column, persistent. Lateral lemma awns present, 14–37 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 5–8.3 mm long. Hilum linear, 0.4 length of caryopsis.

**Distribution (TDWG).** Continent: Australasia.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 192, Fig.10 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 60–120 cm long. Culm-internodes smooth or scaberulous, distally glabrous. Lateral branches sparse. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Ligule a fringe of hairs, 0.3 mm long. Collar glabrous or pubescent. Leaf-blades involute, 7–15 cm long, 1.5 mm wide. Leaf-blade surface scabrous, rough on both sides.

**Inflorescence.** Inflorescence a panicule. Panicle contracted, linear, 12–16 cm long, 3–4 cm wide. Primary panicule branches 4–8 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 7–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, pubescent, acute.


**Florets.** Fertile lemma lanceolate, suberete, 7–10.5 mm long, coriaceous, palld or light brown, without keel, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness or scabrous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, reflexed, with 18–25 mm long limb, with twisted column, persistent. Column of lemma awn 1.3–3 mm long. Lateral lemma awns present, 16–23 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.
**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 4.8–5.3 mm long. Hilum linear.

**Distribution (TDWG). Continent.** Australasia.

**Country /Province /State.** Australia. New South Wales, Queensland. North, South East, Inland. Western Slopes, Western Plains.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations intravaginal. Culms erect, 10–22 cm long, 2-noded. Culm-internodes elliptical in section, distally pubescent. Lateral branches lacking. Leaf-sheaths pubescent. Leaf-sheath oral hairs bearded, 3.5 mm long. Ligule a fringe of hairs. Collar pubescent. Leaf-blades straight or curved or flexuous, flat or conduplicate, 4–6 cm long, 2–2.5 mm wide. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough abaxially, puberulous, hairy adaxially. Leaf-blade margins scaberulous. Leaf-scape apex filiform.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 11–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or lanceolate, 9–10.5 mm long, 0.75 length of upper glume, membranous, 1 -veined. Lower glume primary vein ciliolate. Lower glume lateral veins absent. Lower glume surface glabrous or puberulous. Lower glume apex awned, 1 -awned, awn 0.8 mm long. Upper glume linear or lanceolate, 11–12 mm long, 1.2 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate or awned, 1 -awned, awn 0.8 mm long.

**Florets.** Fertile lemma linear, subterete, 9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma aawn with 14 mm long limb. Lateral lemma awns present, 12 mm long, subequal to principal or shorter than principal. Palea 1.5 mm long, 0.1–0.2 length of lemma, hyaline, 0 -veined.

**Flower and Fruit.** Lodicules 2, 1.5 mm long. Anthers 3, 2 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State.** Southern South America. Argentina Northwest. Jujuy, Salta.


**TYPE** from USA. T:<Type of Basionym>: *fide TROPICOS* and Kew Synonomy Database: HT: L.A.G. Bosc s.n., no date, USA: “carolina” (P; IT: US-81167 (fragm. ex P)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Rhizome s short. Culms slender, 30–80 cm long, 1–2 mm diam. Lateral branches sparse. Leaf-sheaths without keel, glabrous on surface or pubescent. Ligule a fringe of hairs, 0.2–0.3 mm long. Leaf-blades flat or involute, 15–30 cm long, 1–2.5 mm wide. Leaf-blade surface glabrous, hairless except near base.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute.


**Florets.** Fertile lemma linear, subterete, 5–7 mm long, coriaceous, purple, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading, 15–28 mm long overall, with 15–28 mm long limb, without a column. Lateral lemma awns present, spreading less than principal, 13–18 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America, South America.


**TYPE from USA.** T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: T. Nuttall s.n., USA: Oklahoma: Choctow Co.: Red River (PH; IT: LE-TRIN-1330.01 (fragm.), US-18631 (fragm. ex PH)).


**Illustrations (Journals):** Novon (5:219, Fig.6 (1995) as var. perplexa).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms slender, 25–70 cm long. Leaves mostly basal or basal and cauline. Leaf-sheaths glabrous on surface or pubescent. Leaf-sheath oral hairs
pubescent or ciliate. Ligule a fringe of hairs, 0.3–0.6 mm long. Leaf-blades involute, 3–18 cm long, 0.7–2 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 11–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, pungent.

**Glumes.** Glumes dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–8 mm long, 0.5 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 11–15 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 10–12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above or in lines. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 35–45 mm long limb, without a column. Lateral lemma awns present, 35–45 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent North America, South America.

**Country /Province /State.** Western Canada, Northwest USA, North-central USA, Southwestern USA. South-central USA, Southeastern USA. Mexico. Alberta, British Columbia, Manitoba, Saskatchewan. Colorado, Idaho, Montana, Oregon, Wyoming. Iowa, Minnesota. Arizona, California, Nevada, Utah. New Mexico, Texas. South Carolina. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico. **Western South America.** Colombia.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Inflorescence.** Inflorescence a panicle. Panicle open, pyramidal, 15–25 cm long. Primary panicle branches spreading or reflexed, 5–6 cm long. Spikelets solitary. Fertile spikelets sessile. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 6 mm long, 0.75 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex emarginate. Upper glume lanceolate, 5 mm long, 0.75 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate.

**Florets.** Fertile lemma linear, subterete, 10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface asperulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, recurved at base of limb, with 8 mm long limb, with
twisted column. Column of lemma awn 10 mm long. Lateral lemma awns present, 0.5–1 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Northwest Mexico.

Baja California Sur.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Culms 50–90 cm long. Ligule a fringe of hairs. Leaf-blades convolute, 20–50 cm long, 1.5–3 mm wide. Leaf-blade surface ribbed, pubescent, hairy adaxially. Leaf-blade margins scabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 29–38 mm long, breaking up at maturity, disarticulating below each fertile floret. Flocell callus elongated, 1.7 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 23.5–27 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex setaceous acuminate. Upper glume lanceolate, 29–38 mm long, 4–5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex setaceous acuminate, awned.

**Florets.** Fertile lemma lanceolate, subterete, 7.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 70–85 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 16 mm long. Lateral lemma awns present, 70–85 mm long, subequal to principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Northeast Tropical Africa. Somalia.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 165, Fig.4 (1992)), *Proc.Roy.Soc.Qld.* (51:176,Pl.4 (1940) as *A. dissimilis*).

**Images:** D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

**Derivation** (Clifford & Bostock 2007): L. *-ica*, belonging to. From Queensland, Australia.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms erect, 25–100 cm long, 1–2 mm diam., 2–4 -noded. Culm-internodes smooth or scaberulous, distally glabrous or hirsute. Lateral branches lacking or sparse or ample or fastigiate. Leaf-sheaths smooth or scaberulous, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate, 1–3 mm long. Ligule a fringe of hairs, 0.2–0.5 mm long. Collar glabrous or pubescent. Leaf-blades curled, 20–40 cm long, 2 mm wide. Leaf-blade surface scaberulous, rough abaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 9–64 cm long, 2–4.5 cm wide. Primary panicle branches 5–11 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6.2–10.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5–0.9 mm long, pubescent, acute.

**Glumes.** Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.2–11 mm long, 0.8–1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Upper glume acute or acuminate, mucronate. Upper glume lanceolate, 6.2–10.5 mm long, 0.8–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth to scabrous. Upper glume apex acute or acuminate, mucronate, 1 -awned.

**Florets.** Fertile lemma lanceolate, subterete, 5–12 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous. Lemma margins involute, covering most of palea, without distinctive roughness. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 8–16 mm long limb, without a column, persistent. Lateral lemma awns present, 3–10 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3, 0.9–1.9 mm long. Caryopsis with adherent pericarp, sulcate on hilar side, 4.1–6.1 mm long. Hilum linear, 0.3–0.5 length of caryopsis.


**Illustrations (Journals):** Austr. Syst. Bot. (5: 197, Fig.11 (1992)).


**Derivation** (Clifford & Bostock 2007): L. ramosus, branch; -osa, abundance. Inflorescences or culms much branched.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms erect, 37–103 cm long, 2 -noded. Culm-internodes smooth, distally glabrous. Lateral branches ample. Leaf-sheath oral hairs lacking or ciliate, 1.2–2.2 mm long. Ligule a fringe of hairs, 0.5–1 mm long. Collar glabrous or pubescent. Leaf-blades involute, 6–12 cm long, 0.6–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pubescent, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate, 8–27 cm long, 1.5–6 cm wide. Primary panicle branches 2–5 cm long, bearing spikelets almost to the base. Panicle branches with insignificant pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.
**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 6–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5–1.2 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.7–9 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1(–3) -veined. Lower glume primary vein smooth to scabrous. Lower glume lateral veins absent or obscure. Lower glume surface smooth to scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 5.2–10.7 mm long, 0.7–0.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth to scabrous. Upper glume apex obtuse to acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 6–14 mm long, coriaceous, pallid or light brown, concolorous or mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous or papillose. Lemma margins involute or convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn straight or curved, spreading, flat below, with 8–20 mm long limb, without a column, persistent. Lateral lemma awns present, spreading as much as principal, 7–17 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3, 1.3–1.9 mm long. Caryopsis with adherent pericarp, without sulcus or sulcate on hilar side, 5–8.7 mm long. Hilum linear, 0.5 length of caryopsis.

**Distribution (TDWG).** Continent Europe (*), Australasia, Pacific. Region Northern Europe (*).


South-West. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.


**Derivation** (Clifford & Bostock 2007): L. *ramus*, branch; -osa, abundance; -issima, most.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms 25–50 cm long. Lateral branches ample. Leaf-sheaths without keel, glabrous on surface. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades flat or involute, 0.5–1 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 5–12 cm long. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets sessile. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 18–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 13–20 mm long, 0.9 length of upper glume, membranous, 3–7 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 18–22 mm long, 1.1 length of adjacent fertile lemma, membranous, 1–3 -veined. Upper glume lateral veins absent or distinct. Upper glume apex dentate, 2 -fid, acute, awned, 1 -awned, awn 2–6 mm long.

**Florets.** Fertile lemma linear, suberete, 16–25 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, recurved at base of limb, with 18–28 mm long limb, with a straight or slightly twisted column. Column of lemma awn 5 mm long. Lateral lemma awns present, 0.5–4 mm long, shorter than principal.
Flower and Fruit. Anthers 3.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2.5–6 mm long, 0.5–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate, mucronate. Upper glume cuneate, 5–7.5 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins absent. Upper glume apex acuminate, mucronate.

Florets. Fertile lemma elliptic, subterete, 4–5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex rostrate, with a short cylindrical neck, with this appendage 0.5 mm long, awned, 3 -awned. Principal lemma awn 3-branched, with 6–8 mm long limb, without a column, persistent. Lateral lemma awns present, gyrate, 6–8 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Derivation (Clifford & Bostock 2007): L. reflexed. Spikelets with spreading or reflexed awns.

Habit, Vegetative Morphology. Perennial. Culms 53–150 cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking or bearded (deciduous hairs). Ligule a ciliolate membrane, 0.2–0.3 mm long. Collar glabrous. Leaf-blades curled (lower) or straight (upper), flat (lower) or conduplicate (upper), 12–50 cm long, 1–4 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antrorsely scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 16–40 cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight, 0.2–0.4 mm long, pilose, obtuse.

Glumes. Glumes persistent, dissimilar (lower in general slightly longer than upper, sometimes subequal or lower slightly shorter than upper). Lower glume lanceolate, 7.5–12.6 mm long or 5 mm long, 1 -veined. Lower glume primary vein scabrous. Lower glume surface scabrous, rough generally. Lower glume apex setaceously acuminate. Upper glume lanceolate, 7.3–11.5 mm long, 1 -veined. Upper glume surface smooth. Upper glume apex entire, setaceously acuminate.

Florets. Fertile lemma subterete, 3–5 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above, with a median groove (ventral,longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn coiled (at base), ascending, simple at base, with 9.5–21 mm long limb, with twisted column. Column of lemma awn 0.8–2 mm long. Lower lemma awns present, wrapped around principal, 6–17 mm long, subequal to principal.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, Brazil. Belize, Costa Rica, Panama. Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Southeast, Brazil North.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).


Illustrations (Books): G.G.Potgar, C.B.Salunkhe & S.R.Yadav, Grasses of Maharashatra (2012) (Fig. 200).


Derivation (Clifford & Bostock 2007): L. reducto, reduce. Lateral branches of awn very reduced.


Habit, Vegetative Morphology. Annual. Culms 20–90 cm long. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths 1.5–7 cm long, keeled. Ligule a fringe of hairs. Leaf-blades convolute, 7–30 cm long, 1–2 mm wide. Leaf-blade apex acuminating.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, bearded, pungent.

**Florets.** Fertile lemma elliptic, subterete, 10–17 mm long, coriaceous, keeled, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 1 -awned or 3 -awned. Principal lemma awn straight or 3-branched, with 15–20 mm long limb, with a straight or slightly twisted column, persistent. Column of lemma awn 8–10 mm long. Lateral lemma awns absent or present, 0–3 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Tropical Asia.


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**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. curved back abruptly. Mostly applied to species whose mature inflorescences curve back.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms prostrate, 20–60 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades filiform, involute, 5–15 cm long, 0.5 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 4–5 mm long, 0.7–0.8 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, acute, mucronate. Upper glume linear, 5–7 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, acute, mucronate.

**Florets.** Fertile lemma linear, subterete, 4.5 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 10 mm long limb. Lateral lemma awns present, gyrate, 10 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico.

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**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. repo, crawl. Rhizome well developed.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms decumbent, 15–50 cm long, rooting from lower nodes. Culm-internodes terete, smooth or scaberulous. Lateral branches ample. Leaf-sheaths mostly shorter than
adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Collar
glabrous. Leaf-blades flat or convolute, 10–15 cm long, 1–1.5 mm wide. Leaf-blade surface scaberulous,
rough adaxially. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 10–15 cm long. Primary panicle
branches appressed, 1 -nate, 1–3 cm long, bearing spikelets almost to the base. Panicle axis angular,

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1
fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–7 mm long, breaking up at maturity,
disarticulating below each fertile floret. Floret callus evident, 0.5–1.5 mm long, pilose, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower
glume lanceolate, 5–7 mm long, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous.
Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 5–7 mm long,
Upper glume apex dentate, 2 -fid, mucronate.

**Florets.** Fertile lemma oblong, subterete, 3–5 mm long, coriaceous, without keel, 3 -veined, 0–3 -
veined. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute, covering most of
palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 5–10 mm long limb,
with twisted column, deciduous, abscissing from top of column. Column of lemma awn 0.5–2.5 mm long.
Lateral lemma awns present, 5–7 mm long, subequal to principal.

**Distribution (TDWG).** Continent. Pacific and South America.
Country /Province /State. South-central Pacific (Henrard 1999). Marquesas. Western South
America. Galapagos.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World

**TYPE** from Ethiopia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database:
Ethiopia, Gageros: *Schimper in Buchinger* 1229 (P iso, K).


**Derivation (Clifford & Bostock 2007):** Gk. *rhine,* file; *chloa,* grass. Leaf-blades scabrid.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 20–60 cm long. Culm-internodes
antrorsely scabrous, distally glabrous. Culm-nodes pubescent. Leaf-sheath oral hairs bearded. Ligule a
fringe of hairs. Leaf-blades 10–20 cm long, 2–4 mm wide. Leaf-blade surface scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, interrupted, 8–30 cm long. Spikelets
solitary, Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1
fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–17 mm long, breaking up at maturity,
disarticulating below each fertile floret. Floret callus elongated, 1 mm long, bearded, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower
glume lanceolate, 6–17 mm long, 1.1–1.2 length of upper glume, chartaceous, 1-keeled, 1 -veined. Lower
glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acute or acuminate. Upper glume lanceolate, 5–15 mm long, 0.7–1.2 length of adjacent fertile lemma, chartaceous,
1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper
glume apex dentate, 2 -fid, mucronate.

**Florets.** Fertile lemma elliptic, subterete, 7–13 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined.
Lemma surface scabrous, rough in lines. Lemma margins involute, covering most of palea. Lemma apex
acute, awned, 3 -awned. Principal lemma awn 3-branched, with 15–30 mm long limb, persistent. Lateral
lemma awns present, 15–30 mm long, subequal to principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated, scaly. Culms erect, 65–80 cm long. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades flexuous, flat or conduplicate, 7–10 cm long, 1–2 mm wide. Leaf-blade surface glabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 12–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 8–14 mm long, 0.66–0.8 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate or setaceously acuminate. Upper glume linear, 12–17 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acuminate or setaceously acuminate.

**Florets.** Fertile lemma linear, suberete, 9–12 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn reflexed or recurved at base of limb, with 18–24 mm long limb. Lateral lemma awns present, spreading as much as principal, 15–20 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG). Continent.** North America.

**Country /Province /State. Southeastern USA.** Florida.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 53–115 cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.1–0.2 mm long. Collar pubescent (descontinuous on the mid vein). Leaf-blades straight or curved (slightly), conduplicate, (4–)11–84 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted (subcontracted, not linear), 16–34 cm long.
**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.7–1.2 mm long, pilose, acute (subacute).


**Florets.** Fertile lemma subterete, 13–22(–25) mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 50–100 mm long limb, without a column. Lateral lemma awns present, ascending, 50–100 mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil South. Rio Grande do Sul.


**TYPE** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *L. Riedel s.n., Dec 1824, Brazil: Parana: in arenosis ripae rivul i Jacari (LE-TRIN-1340.01; IT: US-81265 (fragm. ex LE)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms (60–)90–130(–180) cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.4–0.8 mm long. Collar glabrous. Leaf-blades straight or curled (lower, very rarely), flat or convolute (upper, rarely), 19–70 cm long, (2.8–)3–5 mm wide. Leaf-blade surface scabrous, rough on both sides, pilose (at base), densely hairy (lanose at base, adaxially), hairy adaxially. Leaf-blade apex acute. antrorsely scabrous.

**Inflorescence.** Inflorescence a panicule. Panicule spiciform, 20–44 cm long. **Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 1–1.5 mm long, bearded, acute.


**Florets.** Fertile lemma subterete, 6–8 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface smooth, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with (26–)32–64 mm long limb, with twisted column. Column of lemma awn (6–)14–24(–52) mm long (sometimes variation in the same inflorescence). Lateral lemma awns present, ascending, 22–42(–60) mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Brazil, Southern South America. Bolivia, Colombia. Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northwest, Argentina Northeast.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, slender, 30–50 cm long, wiry. Leaf-sheaths keeled, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.4 mm long. Leaf-blades ascending or spreading, involute, 2–5(–10) cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subtetere, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 5 mm long, 0.7–0.8 length of upper glume, membranous, 1 -veined. Lower glume primary vein smooth. Lower glume lateral veins absent. Higher glume linear, 6–7 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acuminate, muricinate.

**Florets.** Fertile lemma linear, subtetere, 6 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 10 mm long limb. Lateral lemma awns present, gyrate, 10 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Cuba, Dominican Republic, Haiti.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations (Books):** J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (99, Fig 27).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

Inflorescence. Inflorescence a panicle. Panicle open, linear to elliptic, dense, 12–25 cm long. Primary panicle branches 2–6 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pilose, acute.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7.5 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent or obscure. Lower glume surface pubescent. Lower glume apex attenuate, awned, 1 -awned, aww 1–2 mm long. Upper glume lanceolate, 8.5 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled. Upper glume primary vein scabrous. Upper glume apex attenuate, awned, 1 -awned, aww 1–2 mm long.

Florets. Fertile lemma lanceolate, subterete, 4.5 mm long, coriaceous, without keel, 0–3 -veined. Lemma midvein scabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 13–14 mm long limb, with a straight or slightly twisted column. Column of lemma aww 2 mm long. Lateral lemma awws present, 13–14 mm long, subequal to principal.

Flower and Fruit. Anthers 3.


Country /Province /State. Western Indian Ocean. Madagascar.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): from St. Luzia, Brazil.


Habit, Vegetative Morphology. Annual. Culms 10–25 cm long. Leaf-sheath oral hairs scanty. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades erect, straight, conduplicate, 2.9–8 cm long, 0.8–1.2 mm wide. Leaf-blade surface scabrous, rough abaxially. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 4–9 cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, 3.4–3.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.2–0.3 mm long, pilose, obtuse.

Glumes. Glumes similar. Lower glume lanceolate, 2.8–3.5 mm long, 0.8–0.9 length of upper glume, purple, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, setaceousy acuminate. Upper glume lanceolate, 3.4–3.8 mm long, 1.2 length of adjacent fertile lemma, purple, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, attenuate.

Florets. Fertile lemma lanceolate, subterete, 2.8–3.2 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma aww 3-branched, with 7.5–10 mm long limb, with twisted column. Column of lemma aww 0.8–1 mm long. Lateral lemma awws present, ascending, 7.5–10 mm long, shorter than principal.

Distribution (TDWG). Continent. South America.


*Illustrations*: None found.


*Classification*. Subfamily Aristidoideae. Tribe: Aristideae.

*Distribution (TDWG)*. Continent. South America.

*Country /Province /State*. Caribbean. Cuba.


*Illustrations*: None found.


*Classification*. Subfamily Aristidoideae. Tribe: Aristideae.


*Fertile Spikelets*. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 15–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

*Glumes*. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 13–17 mm long, 0.9–1 length of upper glume, membranous, 3 -veined. Lower glume primary vein ciliolate. Lower glume lateral veins absent or obscure. Lower glume apex awned, 1 -awned, aven 1–1.5 mm long. Upper glume linear, 15–17 mm long. 1.5 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate or awned, 1 -awned, aven 0.5–1 mm long.

*Florets*. Fertile lemma linear, subterete, 10–11 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 40–45 mm long limb. Lateral lemma awns present, 35–40 mm long, subequal to principal or shorter than principal. Palea 1.75–2 mm long, 0.1–0.2 length of lemma, hyaline, 0 -veined.

*Flower and Fruit*. Lodicules 2, 1.75 mm long. Anthers 3. Caryopsis with adherent pericarp.

*Distribution (TDWG)*. Continent. South America.


**Illustrations:** None found.


**Derivation** (Clifford & Bostock 2007): L. *scaber*, rough; valva, leaf of a folding door. The lemmas and/or glumes are densely hispid.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 15–50 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades 3–30 cm long, 2–3.5 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 7–30 cm long, evenly furnished or with spikelets clustered towards branch tips. Primary panicle branches branching divaricate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5 mm long, pilose, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.5–6 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface glabrous or puberulous. Lower glume apex acute, awned, 1 -awned, awn 1–2.5 mm long. Upper glume lanceolate, 5–8 mm long, 1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 635).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 40 cm long, 0.5–1 mm diam., 1–2-noded. Leaves mostly basal. Ligule a fringe of hairs. Leaf-blades involute, 10 cm long, 1–2 mm wide. Leaf-blade surface pilose.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–7 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 8–10 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic, subterete, 7–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 8–10 mm long limb, with twisted column, persistent, limb scabrous. Column of lemma awn 2–3 mm long. Lateral lemma awns present, 5–7 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3, 5 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: Temperate Asia.

**Country /Province /State.** China. Tibet.
vein scaberulous. Upper glume lateral veins absent. Upper glume surface glabrous or puberulous. Upper

Florets. Fertile lemma elliptic, subterete, 5–7 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma surface smooth or scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 10–
20 mm long limb, persistent. Lateral lemma awns present, 10–20 mm long, subequal to principal. Palea 0.1

Flower and Fruit. Anthers 3.

Distribution (TDWG), Continent. Africa.


TYPE from Somalia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT:

Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–50 cm long, wiry. Ligule a fringe of


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 18–20 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, thinner than fertile lemma. Lower glume lanceolate, (10.5–)12–13 mm long, 0.6–0.7 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1 -awned, awn (5–)8–9 mm long. Upper glume lanceolate, 18–20 mm long, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate, awned, 1 -awned, awn (6.5–)13–14 mm long.

Florets. Fertile lemma lanceolate, subterete, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 50–65 mm long limb, with twisted column, deciduous, absessing from top of lemma. Column of lemma aww 10 mm long. Lateral lemma awns present, 50–65 mm long, subequal to principal. Palea without keels.

Flower and Fruit. Anthers 3.


TYPE from Mexico. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT:

Illustrations (Journals): *Ruizia* (13:233, Fig 26g-h (1993)).


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 75–150 cm long. Ligule a fringe of hairs. Leaf-blades flat or involute, 20–40 cm long, 1–3 mm wide. Leaf-blade surface ribbed, scabrous, rough adaxially. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.7 mm long, pubescent, obtuse.

Glumes. Glumes similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–11 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface puberulous, hairy generally or in lines. Lower glume apex acuminate. Upper glume lanceolate, 6–11 mm long, 1–1.1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma linear, subterete, 5–11 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned or 3 -awned. Principal lemma awn geniculate or 3-branched, with 5–15 mm long limb, with twisted column. Column of lemma awn 5–6 mm long. Lateral lemma awns absent or present, 0–2.5 mm long, shorter than principal.

Flower and Fruit. Anthers 3.

$2n = 22$ (1 ref TROPICOS), or 44.


Country /Province /State. Southwestern USA, South-central USA, Mexico. Arizona, California. New Mexico, Texas, Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Western South America. El Salvador, Guatemala, Honduras, Nicaragua. Bolivia, Colombia, Ecuador, Peru.


Illustrations (Journals): *Austr. Syst. Bot.* (5: 188, Fig.9 (1992)).

Derivation (Clifford & Bostock 2007): in honor of Frederick Schultz (fl. 1869) who collected in northern Australia.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 35–65 cm long. Culm-internodes smooth, distally glabrous. Lateral branches fastigate. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate, 3–4 mm long. Ligule a fringe of hairs, 0.4–0.6 mm long. Collar glabrous. Leaf-blades flexuous, involute, 10–25 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted, elliptic, 22 cm long, 6 cm wide. Primary panicle branches 2–4 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.
**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 11–21 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–18 mm long, 0.6–0.9 length of upper glume, membranous, 1-keeled, 3–7 -veined. Lower glume surface asperulous or scabrous, rough above. Lower glume apex acute or acuminate, awned, 1 -awned, awn 1–2.3 mm long. Upper glume lanceolate, 11–21 mm long, 1.1–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate, awned, 1 -awned, awn 1–2.5 mm long.

**Florets.** Fertile lemma lanceolate, suberete, 10–12 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, suberete below, with 20–30 mm long limb, with twisted column, persistent. Column of lemma awn 5–7 mm long. Lateral lemma awns present, 18–26 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 7–8 mm long. Hilum linear, 0.2 length of caryopsis.

**Distribution (TDWG). Continent.** Australasia.

**Country /Province /State.** Australia. Northern Territory, Queensland. Darwin & Gulf. North, Central.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 179, Fig.7 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms 70–200 cm long, 3–6 -noded. Culm-internodes glaucous, glabrous, smooth, distally glabrous. Lateral branches sparse. Leaf-sheaths smooth, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.2–0.5 mm long. Collar glabrous or pubescent. Leaf-blades curled or flexuous, 10–21 cm long, 2 mm wide. Leaf-blade surface scaberulous, rough adaxially, glabrous or pilose, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, linear, 16–60 cm long, 1–4 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 10.5–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10.5–17 mm long, 1 length of upper glume, membranous, 1-keeled, 3–5 -veined. Lower glume surface smooth to scabrous. Lower glume apex obtuse, awned, 1 -awned, awn 1.5–4 mm long. Upper glume lanceolate, 10.5–17 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate.

**Florets.** Fertile lemma lanceolate, suberete, 8.5–13 mm long, coriaceous, pallid or light brown or purple, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or papillose, rough above. Lemma
margins involute, covering most of palea, scabrous. Lemma apex acute, awned, 3 -awned. Principal lemma awn curved, flat below, 2 mm long overall, with 15–36 mm long limb, without a column, persistent. Lateral lemma awns present, spreading as much as principal, 11–30 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side, 7.5–9 mm long. Hilum linear, 0.4–0.5 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Queensland.

North, Central, Inland.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subtetere, 11–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1 mm long, bearded, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–7 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous, rough above. Lower glume apex acute. Upper glume oblong, 11–13 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume mucronate.

**Florets.** Fertile lemma elliptic, subtetere, 10–12 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex rostrate, awned, 3 -awned. Principal lemma awn with 15–23 mm long limb, persistent. Lateral lemma awns present, 15–23 mm long, subequal to principal. Palea without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, linear.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Southern Africa. Limpopo, Mpumalanga, Swaziland, Free State, KwaZulu-Natal.


**Illustrations:** None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–9 mm long, 0.75 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume surface woolly. Lower glume apex acuminate or setaceously acuminate. Upper glume lanceolate, 8–11 mm long, 1.6–2 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume surface woolly. Upper glume apex acuminate or setaceously acuminate.

Florets. Fertile lemma linear, subterete, 5–6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 10–15 mm long limb, with twisted column. Column of lemma awn 4–5 mm long. Lateral lemma awns present, 10–15 mm long, subequal to principal.

Flower and Fruit. Anthers 3.

2n = 22 (1 ref TROPICOS).


TYPE from India. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Knig s.n., India: in aridis steriliobius Malabaricae (LD; IT: B-W).


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths coriaceous, yellow, glossy. Culms erect, 50–120 cm long. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades filiform, flat or convolute, 20–40 cm long, 2–2.5 mm wide. Leaf-blade surface scabrous, rough adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 9–13 mm long, 0.75–0.9 length of upper glume, scarious, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex attenuate, awned, 1 -awned, awn 2–5 mm long. Upper glume oblong, 12–15 mm long, 1 length of adjacent fertile lemma, scarious, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 2–5 mm long.

Florets. Fertile lemma linear, subterete, 11–13 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal
lemma awn 25–40 mm long overall, persistent. Lateral lemma awns present, 25–40 mm long, subequal to principal. Palea 1.3 mm long, 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

2n = 22.

**Distribution (TDWG).** Continent. Africa, Tropical Asia.

**Country /Province /State.** Western Indian Ocean. Mauritius (*), Madagascar, Rodrigues, Seychelles.


**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (51, Fig. 17 & 53, Fig. 18 as A. doelliana), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (33, Fig. 16).

**Illustrations (Journals):** Ruizia (13:233, Fig 26c-d (1993)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 40–100(–150) cm long. Lateral branches sparse, arising from mid culm or upper culm. Leaf-sheath oral hairs lacking (or pilose, deciduous hairs). Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades straight, conuplicate or flat (less frequent), (4–)7–25(–46) cm long, 1–6 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous (generally) or pilose, hairless except near base, hairy adaxially. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted (or subcontracted), 9–16(–32) cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.8–1 mm long, bearded, acute.


**Florets.** Fertile lemma subterete, 4–5 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma midvein scabrous (on keel). Lemma surface scaberulous, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending (generally) or reflexed (less frequent), with 10–24 mm long limb, with twisted column, deciduous, abscissing from top of column. Column of lemma awn 2–5 mm long. Lateral lemma awns present, ascending, 4–5 mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica, Northern South America, Western South America, Brazil. Belize, Honduras, Guyana, Surinam, Venezuela. Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–100 cm long, 2–4 mm diam., woody. Culm-internodes distally glabrous. Lateral branches suffrutescent. Ligule a fringe of hairs. Leaf-blades involute, 5–30 cm long, 1–2 mm wide, glaucous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or lanceolate, 8–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, pubescent, with longer hairs above, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–15 mm long, 0.5–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn (1–2)–5 mm long. Upper glume linear, 15–20 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex lobed, 2 -fid, awned, 1 -awned, awn (1–3)–9 mm long.

**Florets.** Fertile lemma oblong (cylindrical), subterete, (7–)9–12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous or scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 45–85 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn (12–)18–30 mm long. Lateral lemma awns present, 30–70 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa, Temperate Asia.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations (Books):** J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (103, Fig 29).

**Derivation** (Clifford & Bostock 2007): L. like. Readily confused with one or more other species.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 40–60 cm long. Lateral branches sparse. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs. Leaf-blades convolute, 5–15 cm long, 1 mm wide. Leaf-blade surface smooth, glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 7–10 cm long, 0.5–1 cm wide. Primary panicle branches 1–2 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5 mm long, 0.66 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex setaceously acuminate. Upper glume lanceolate, 7–8 mm long, 2.5 length of adjacent fertile lemma, membranous, 1-keeled. Upper glume primary vein smooth. Upper glume apex setaceously acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 3 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 12–13 mm long limb, with twisted column. Column of lemma awn 2–3 mm long. Lateral lemma awns present, 9–10 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Western Indian Ocean. Madagascar.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, slender, 30–60 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades flat, 5–15 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, sparsely hairy, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, curved, 10–20 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.75 mm long, pubescent, pungent.


**Florets.** Fertile lemma linear, subterete, 5–6 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex scabrous, awned, 3 -awned. Principal lemma awn recurved at base of limb, with 15 mm long limb. Lateral lemma awns present, spreading less than principal, 12 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southeastern USA. Alabama, Florida, Georgia, Mississippi, North Carolina.


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 13–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–12 mm long, 0.6–0.7 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, muticous or mucronate. Upper glume linear, 13–18 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, suberete, 6–8 mm long, coriaceous, without keel, 3 -veined, 0–3 - veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 25–40 mm long limb, with twisted column, persistent. Column of lemma awn 7–10 mm long. Lateral lemma awns present, 25–40 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Illustrations (Journals): Novon (5:215, Fig.4 (1995)).

Derivation (Clifford & Bostock 2007): Gk spanos, scarce; L. spika, spike; -ula, diminutive. Spikelets fewer than in related species.


Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 20–60 cm long. Culm- internodes terete, smooth or scaberulous, distally glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths longer than adjacent culm internode, without keel, glabrous on surface or pilose. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades flat or conduplicate, 14–25 cm long, 1.5–2 mm wide. Leaf-blade surface glabrous or puberulous, hairy adaxially. Leaf-blade margins cartilaginous.

Inflorescence. Inflorescence a panicle, comprising 3–12 fertile spikelets. Panicle open, oblong, equilateral or nodding, 8–22 cm long, 1–2 cm wide, bearing few spikelets. Primary panicle branches ascending, bearing 1–2(–4) fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.
**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 16–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–1 mm long, pubescent.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–15 mm long, 1 length of upper glume, membranous, light brown, 1-veined. Lower glume lateral veins absent. Upper glume lanceolate, 9–15 mm long, 1–1.5 length of adjacent fertile lemma, membranous, light brown, 1-veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 10 mm long, coriaceous, without keel, 3-veined, 0–3-veined. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 1-awned. Principal lemma awn geniculate, with 10–20 mm long limb, with twisted column. Column of lemma awn 6–15 mm long. Lateral lemma awns absent. Palea 1 mm long, hyaline, 2-keeled.

**Flower and Fruit.** Lodicules 2, 1–1.5 mm long. Anthers 3, 2 mm long, brown. Caryopsis with adherent pericarp, fusiform, 7–9 mm long.

**Distribution (TDWG).** Continent: North America.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. showy. Attractive or outstanding in some respect such as height.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, robust, 100–180 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs lacking or woolly. Ligule a fringe of hairs. Leaf-blades flat or involute, 30–60 cm long, 4–5 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, bearded, 2-toothed.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or lanceolate, 6–12 mm long, 0.5–1 length of upper glume, membranous, much thinner above, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume linear or lanceolate, 10–12 mm long, 1.5 length of adjacent fertile lemma, membranous, much thinner above, 1-keeled, 1-veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 6.5–7.5 mm long, coriaceous, keeled, 3-veined, 0–3-veined. Lemma surface smooth or scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3-awned. Principal lemma awn 3-branched, with 35–44 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 5–6 mm long. Lateral lemma awns present, 20–28 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: Africa.

Country /Province /State. Southern Africa. Limpopo, North-West, Gauteng.


Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, Flora Argentina 3 – 1, Aristidoideae a Pharaoideae (2012) (42), L.B. Smith, D.C. Wasshausen, R.M. Klein Flora Illustrada Catarinensis Gramineas (1981–1982) (507, Fig. 108 & 535, Fig. 116), A.Burkat, Flora Ilustrada de Entre Rios (Argentina), Pt II, Gramineas (1969) (219, Fig. 82), A.L.Cabrera, Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas (1970) (366, Fig. 93), M.N.Correa. Flora Patagonica Parte III, Gramineae (1978) (473, Fig. 316), B.Rosengurtt, Gramineas UruguayasI (1970) (214, Fig. 88).


Habit, Vegetative Morphology. Annual. Culms 22–70 cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.8–1.2 mm long. Collar glabrous. Leaf-blades curled or flexuous, convolute, 5–27 cm long, 0.5–1.2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, smooth.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.5–1 mm long, pilose, acute (or subacute).


Florets. Fertile lemma subterete, 10–14(–16) mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above, with a median groove (ventral,longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 30–118 mm long limb, without a column. Lateral lemma awns present, ascending, 30–118 mm long, subequal to principal.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil Southeast, Brazil South. Argentina Northeast, Argentina South, Chile Central, Uruguay.


Aristida spiciformis Ell. Sketch 1: 141. (1816).


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–100 cm long. Leaf-sheath oral hairs lacking or ciliate. Ligule a fringe of hairs. Leaf-blades erect, flat or involute, 15–30 cm long, 1–3 mm wide. Leaf-blade surface scabrous, rough adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 2 mm long, pubescent, pungent.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 4 mm long, 0.5 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1 -awned, awn 10–12 mm long. Upper glume linear, 8–10 mm long, 1.6 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate, awned, 1 -awned, awn 10–12 mm long.

Florets. Fertile lemma linear, subterete, 5–6 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 20–30 mm long limb, with twisted column. Column of lemma awn 10–30 mm long. Lateral lemma awns present, spreading as much as principal, 20–30 mm long, subequal to principal.

Flower and Fruit. Anthers 3.


Illustrations (Journals): Austr. Syst. Bot. (5: 151, Fig.1 (1992)).

Images: D.Sharp & B.K.Simon, AusGrass. Grasses of Australia. CD-Rom Version 1.0. (2002). Derivation (Clifford & Bostock 2007): L. spurious. The lateral awns of the lemma are insignificant or absent, the spikelets then resembling those of Stipa..


Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 20–91 cm long. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous. Lateral branches fastigiate. Leaf-sheaths striately veined, smooth or scaberulous, glabrous on surface or pilose. Leaf-sheath oral hairs lacking or ciliate, 1–2 mm long. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades curled or flexuous, filiform, involute, 8–12 cm long, 0.5 mm wide. Leaf-blade surface smooth or scaberulous, rough on both sides.

Inflorescence. Inflorescence a panicule. Panicle contracted, linear, 11–29 cm long, 0.9–1 cm wide. Primary panicle branches 2 -nate, 4–6.5 cm long. Panicle branches scaberulous or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–1.3 mm long, pubescent, acute. Floret callus hairs 1–1.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.5–13 mm long, 0.9–1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower
glume primary vein scabrous. Lower glume surface smooth or asperulous, glabrous or pilose. Lower glume apex acute or acuminate, awned, 1 -awned, awn 1.5 mm long. Upper glume lanceolate, 6.5–13 mm long, 0.9–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface glabrous or pilose. Upper glume apex dentate, 2 -fid, acute or acuminate, awned, 1 -awned, awn 2.5 mm long.

**Florets.** Fertile lemma lanceolate, subterete, 7–12.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scaberulous. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn geniculate or 3-branched, with 6–20 mm long limb, with twisted column, persistent. Column of lemma awn 4–9 mm long. Lateral lemma awns absent or present, 0–4 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3, 1.1–1.7 mm long. Caryopsis with adherent pericarp, sulcate on hilar side, 4.8–8 mm long. Hilum linear, 0.3 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

Country /Province /State. Australia. New South Wales, Queensland. North, Central, South East, Inland. Western Slopes.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 30–40 cm long, wiry. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 7–20 cm long, 0.5–1 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 14–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, pubescent, with longer hairs above, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–9 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute, muticous or mucronate. Upper glume lanceolate, 14–20 mm long, 3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex entire or dentate, 2 -fid, obtuse or acute, muticous or mucronate.

Florets. Fertile lemma lanceolate, subterete, 5–6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 35–55 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 10–20 mm long. Lateral lemma awns present, 35–55 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–120 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades convolute, 20–60 cm long, 2–4 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–19 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pilose, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–19 mm long, 1–1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, acute, mucronate or awned, awn 0–2 mm long. Upper glume lanceolate, 10–19 mm long, 1–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate or awned, 1 -awned, awn 0–2 mm long.

Florets. Fertile lemma elliptic, subterete, 10–13 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness or scaberulous. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 20–30 mm long limb, without a column or with a straight or slightly twisted column, persistent. Column of lemma awn 0–4 mm long. Lateral lemma awns present, 20–30 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–150 cm long, 4–6 -noded. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades flat or involute, 5–30 cm long, 2–4 mm wide, glaucous. Leaf-blade surface scaberulous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted or spiciform, linear, continuous or interrupted, 10–25 cm long. Primary panicle branches appressed or ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 18–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–3 mm long, bearded, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–13 mm long, 0.6 length of upper glume, chartaceous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex setaceously...
acuminate. Upper glume lanceolate, 18–22 mm long, 2.2–2.5 length of adjacent fertile lemma, chartaceous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex entire or dentate, 2 -fid, attenuate, awned, 1 -awned, awn 1–5 mm long.

**Florets.** Fertile lemma elliptic, subterete, 8–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface punctate. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 25–60 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 20–40 mm long. Lateral lemma awns present, 25–60 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG), Continent.** Africa.


**Aristida stipoides** Lam. *Encycl.* 1: 157 (1783).


**Derivation (Clifford & Bostock 2007):** Gk. -oides, resembling. With spikelets resembling those of *Stipa*.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 90–150 cm long. Culm-internodes distally glabrous. Leaf-sheath oral hairs woolly. Ligule a fringe of hairs. Leaf-blades flat or involute, 15–30 cm long, 2–4 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, effuse, equilateral or nodding, 20–50 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 14–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pilose, 2-toothed.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–7 mm long, 0.3–0.4 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 14–20 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

**Florets.** Fertile lemma elliptic, subterete, 7–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 35–60 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 15–30 mm long. Lateral lemma awns present, 30–50 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG), Continent.** Africa.


**Illustrations (Books):** G.G. Potgar, C.B. Salunkhe & S.R. Yadav, Grasses of Maharashtra (2012) (Fig. 202).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms 10–20 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades convolute, 2–6 cm long, 1–2.5 mm wide, stiff. Leaf-blade surface ribbed. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 22–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, pubescent, punget.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 22–25 mm long, 3.5–4 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 3 mm long. Upper glume linear, 6 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, suberete, 5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 60–70 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 20 mm long, pubescent. Lateral lemma awns present, 60–70 mm long, subequal to principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State**. Indian Subcontinent. India.

Gujarat, Karnataka, Maharashtra.


**Images:** R. Darke, *The Encylopaedia of Grasses for Liveable Landscapes* (2007):.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–100 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs. Leaf-blades flexuous, involute, 30–40 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous, hairless except near base.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75 mm long, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 7–9 mm long, 1 length of upper glume, membranous, 1–2 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent or distinct. Lower glume apex setaceously acuminate. Upper glume linear,

**Florets.** Fertile lemma linear, subterete, 6 mm long, coriaceous, 3-veined, 0–3-veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3-awned. Principal lemma awn ascending or spreading, with 10–15 mm long limb. Lateral lemma awns present, spreading as much as principal, 8–12 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southeastern USA. Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina.


**Derivation** (Clifford & Bostock 2007): L. covered with short, bristle-like hairs. One or more organs covered with bristle-like hairs.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–120 cm long, 3–6-noded. Culm-internodes scaberulous, distally glabrous. Lateral branches sparse. Leaf-sheaths longer than adjacent culm internode, striately veined, scaberulous or antrosely scabrous. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs, 0.5–1 mm long. Collar glabrous. Leaf-blades 9–18 cm long, 2–3 mm wide. Leaf-blade surface scabrous, rough on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 16–36 cm long, 1.5–3 cm wide. Spikelets solitary. Fertile spikelets pedicellated. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8.5–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–10 mm long, 0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth to scabrous. Lower glume apex acute to setaceously acuminate. Upper glume lanceolate, 7–12 mm long, 0.8–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate or acute, muticous or mucronate.

**Florets.** Fertile lemma lanceolate, subterete, 8.5–12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 13–26 mm long limb, without a column, persistent. Lateral lemma awns present, 12–20 mm long, subequal to principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 5–8 mm long. Hilum linear, 0.5 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. New South Wales, Northern Territory, Queensland, South Australia, Western Australia.


**TYPE** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: W.J. Burchell 5025 pro parte, no date, Brazil: Sao Paulo (S; IT: BR, K, US-81245 (fragm. ex Dvll herb, Freiburg), W).

**Illustrations:** None found.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms 60–80 cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking. Ligule a ciliolate membrane, 0.2 mm long. Collar glabrous. Leaf-blades straight, flat (generally) or convolute, 35–40 cm long, 3–4.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, smooth.

**Inflorescence.** Inflorescence a panicle. Panicle spiciform, 14–16 cm long. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 1 mm long, pilose, acute (subacute).


**Florets.** Fertile lemma subterete, 10–11 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above, with a median groove (ventral,longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn curved, reflexed, simple at base, with 25 mm long limb (from x to 25), without a column. Lateral lemma awns present, spreading as much as principal, 25 mm long (from x to 25), subequal to principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast. Catarina, Rio Grande do Sul, Sao Paulo.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *sub*, approaching; *spica*, spike; -ata, possessing. Inflorescence a spike-like panicle.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 20–50 cm long, 2–3 -noded. Culm-internodes terete, smooth or scaberulous. Lateral branches lacking or sparse. Leaf-sheaths mostly shorter than adjacent culm internode, keeled, scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Collar glabrous. Leaf-blades filiform or linear, flat or convolute, 5–20 cm long, 0.5–3 mm wide. Leaf-blade midrib keeled beneath. Leaf-blade venation distinct. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle, exserted or embraced at base by subtending leaf. Peduncle pubescent above to hirsute above. Panicle spiciform, linear or oblong, 6–15 cm long. Primary panicle branches 1-nate. Panicle axis terete or angular, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.
**Fertile Spikelets.** Spikelets comprising 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pilose, obtuse.


**Florets.** Fertile lemma oblong, subterete, 3–4 mm long, coriaceous, keeled, lightly keeled, 3 -veined, 0–3 -veined. Lemma surface smooth or papillose, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 10–15 mm long limb, with twisted column, deciduous, abscissing from top of column. Column of lemma awn 1.5–4 mm long. Lateral lemma awns present, 12–15 mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Marquesas. Western South America. Galapagos.


**TYPE from Argentina.** T:<Type of Basionym>; fide TROPICOS and Kew Synonomy Database: HT: A. Castellanos s.n. [herb. Lorenzo R. Parodi no. 18 39], 8 Jan 1927, Argentina: La Pampa: Maracs (L-927.250–232; IT: BAA-17/117, US-1447540 (also fragm. ex L)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 15–50 cm long, 2–4 -noded. Lateral branches sparse. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Collar glabrous. Leaf-blades filiform, convolute, 1 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 12.5–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 9–12 mm long, 0.75–0.85 length of upper glume, membranous. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume lanceolate, 6–7 mm long, membranous. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 12–13 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface asperulous, rough above. Lemma margins involute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn straight, with 3.5–4 mm long limb. Lateral lemma awns present, 3.5–4 mm long, subequal to principal.

**Flower and Fruit.** Caryopsis with adherent pericarp, fusiform, light brown.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Southern South America. Argentina Northwest, Argentina Northeast, Argentina South.


**Accepted by:** U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).


**Illustrations:** None found.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms (27–)35–50(–90) cm long. Lateral branches lacking. Leaf-sheath oral hairs scanty or bearded (innovations). Ligule a ciliolate membrane, 0.2–0.5 mm long. Collar glabrous. Leaf-blades straight, flat (generally), (15–)18–25(–30) cm long, (1.5–)2–3 mm wide. Leaf-blade surface scabrous (ventral) or scaberulous (dorsal), rough on both sides, glabrous. Leaf-blade apex acute, smooth.

**Inflorescence.** Inflorescence a panicle. Panicle contracted (subcontracted), 10–18(–23) cm long. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.5–0.6 mm long, pilose, acute (subacute).

**Glumes.** Glumes persistent, dissimilar (lower shorter than upper, sometimes subequal,rarely lower slightly longer than upper). Lower glume lanceolate, (6.2–)7–10.5 mm long, 1 -veined. Lower glume surface scabrous, rough on veins. Lower glume apex obtuse or cuspidate, muticous. Upper glume lanceolate, 7.2–11 mm long, 1 -veined. Upper glume surface smooth. Upper glume apex entire, obtuse or cuspidate.

**Florets.** Fertile lemma subterete, 9–10.5 mm long (beaked), without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma surface scaberulous, rough above, with a median groove (ventral,longitudinal). Lemma margins involute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 22–28(–35) mm long limb, without a column. Lateral lemma awns present, ascending, 18–22(–32) mm long, shorter than principal.

**Distribution (TDWG).** Continent: South America. Country /Province /State: Brazil, Western South America (Bolivia). Bolivia. Brazil Southeast. Sao Paulo.


**TYPE** from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *K. Domin s.n.*, Feb 1910, Australia: Queensland: Cook Dist.: in den Savannenwaldern bei Mareba (L (2 sheets; photo, BRI); IT: BRI).


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 155, Fig.2 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 60–120 cm long. Culm-internodes antrorsely scabrous, distally glabrous. Leaf-sheaths scaberulous or antrorsely scabrous, glabrous on surface. Leaf-sheath oral hairs ciliate, 4–5 mm long. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades curled, filiform or linear, involute, 15–27 cm long, 0.6–1.2 mm wide. Leaf-blade surface scaberulous or scabrous, rough on both sides, pilose, hairy adaxially.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret and or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 16–21 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.6–2.2 mm long, pubescent, pungent. Floret callus hairs 0.2–1.8 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–15.2 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute or acuminate, awned, 1 -awned, awn 1.5 mm long. Upper glume lanceolate, 16–21 mm long, 1.6–2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate, awned, 1 -awned, awn 1.5 mm long.

Florets. Fertile lemma lanceolate, suberete, 8–12.6 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, spreading, with 35–99 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 11–34 mm long. Lateral lemma awns present, spreading less than principal, 26–86 mm long, shorter than principal.Palea 0.2 length of lemma, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, 5.6–7.2 mm long. Hilum linear, 0.75 length of caryopsis.

Distribution (TDWG). Continent. Tropical Asia, Australasia.
Northern Territory, Queensland.
Darwin & Gulf. North.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 50–60 cm long. Culm-internodes striate, smooth. Lateral branches ample. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, smooth, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 10–15 cm long, 0.5–1 mm wide. Leaf-blade surface scaberulous, rough on both sides, glabrous or pilose, sparsely hairy, hairy abaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret and or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5 mm long, pilose, acute.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 4–5 mm long, 0.7–0.8 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume linear, 5.5–6.5 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma linear, subterete, 5–6 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, 15 mm long overall. Lateral lemma awns present, 15 mm long, subequal to principal.

Flower and Fruit. Anthers 3.


**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 40–70 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades erect, involute, 15–30 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, sparsely hairy, hairy axadally.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5 mm long, pubescent, acute.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 7 mm long, 0.9 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume linear, 8 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florlets.** Fertile lemma linear, subterete, 8 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma margins convolute, covering most of palea. Lemma apic with a short cylindrical neck, with this appendage 1 mm long, awned, 3 -awned. Principal lemma aww 3-branched, with 15–25 mm long limb. Lateral lemma awns present, spreading less than principal, 15–25 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean, Northern South America, Western South America. Aruba, Bahamas, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Venezuelan and Netherlands Antilles. Venezuela, Bolivia, Ecuador, Galapagos, Peru.


**TYPE** from Japan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Liukiu; Chibana in Nakaku-sugori, 12 Sep 1930, T. Ito (HT: KYO).


**Derivation** (Clifford & Bostock 2007): in honor of Takeo.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Rhizomes short. Culms erect, slender, 40–60 cm long, 0.5–0.7 mm diam., 3 -noded. Leaf-sheaths tight, mostly shorter than adjacent culm internode, glabrous on surface. Ligule a fringe of hairs. Leaf-blades filiform, involute, 15–20 cm long, 0.3–0.7 mm wide, stiff. Leaf-blade surface scabrous, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 11–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, acute.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–8.5 mm long, 0.75 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 10–12 mm long, 1.2–1.3 length of adjacent fertile lemma, chartaceous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 8–9 mm long, coriaceous, light green, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 18–20 mm long limb, with twisted column. Column of lemma awn 11–13 mm long. Lateral lemma awns present, 13–16 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** Eastern Asia. Nansei-Shoto.

**Aristida tarapotana** Mez. Fedde, Repert. 17: 151 (1921).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating location. From Tarapoto, Peru.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–40 cm long. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 10–23 cm long, 1 mm wide, stiff.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–12 mm long, 1 length of upper glume, membranous. Lower glume apex dentate, 2 -fid. Upper glume linear, 10–12 mm long, 1.2 length of adjacent fertile lemma, membranous. Upper glume apex dentate, 2 -fid.

**Florets.** Fertile lemma linear, subterete, 8.5–10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 20–24 mm long limb. Lateral lemma awns present, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Peru.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 60 cm long, 1 mm diam. Leaf-sheaths without keel, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades involute, 10–20 cm long, 1–1.5 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins cartilaginous. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse.

Glumes. Glumes similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–12 mm long, 1 length of upper glume, membranous, 3 -veined. Lower glume surface scabrous, rough on veins. Lower glume apex setaceously acuminate. Upper glume lanceolate, 10–11 mm long, membranous, 3 -veined. Upper glume surface smooth. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear, subterete, 10 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface asperulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 10–15 mm long limb, with a straight or slightly twisted column. Column of lemma awn 2–3 mm long. Lateral lemma awns present, 10–15 mm long, subequal to principal.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 20–30 cm long. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 8–20 cm long, 1 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 21–23 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–9.5 mm long, 0.4 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 2–3 mm long. Upper glume lanceolate, 21–23 mm long, 3.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 7–10 mm long.

Florets. Fertile lemma oblong, subterete, oblong in profile (cylindrical), 6–6.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 95–105 mm long limb, with twisted column, deciduous, abscessing from top of lemma. Column of lemma awn 12–25 mm long. Lateral lemma awns present, 95–105 mm long, subequal to principal. Palea without keels.

Flower and Fruit. Anthers 3.

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online.


**Illustrations (Books):** J. Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (119, Fig 37).

**Derivation** (Clifford & Bostock 2007): L. slender; -issima, most. Inflorescence slender.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms slender, 10–50 cm long, 0.3–0.5 mm diam. Culm-internodes distally glabrous. Lateral branches lacking or sparse. Leaf-sheaths striately veined, glabrous on surface or pilose. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 2–12 cm long, 0.5–0.8 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, 3–8 cm long, bearing few spikelets. Primary panicle branches 1–2-nate, bearing 1–3 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 4–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent, truncate.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3–4.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 4–6.5 mm long, 1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex truncate, mucronate.

**Florets.** Fertile lemma lanceolate, subterete, 4–5 mm long, coriaceous, mid-green or purple, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 1 -awned or 3 -awned. Principal lemma awn geniculate or 3-branched, with 8–10 mm long limb, with twisted column, persistent. Column of lemma awn 3–4 mm long. Lateral lemma awns absent or present, when present 3–5 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.


**Illustrations (Books):** B. Rosengurt, *Gramineas Uruguayas I* (1970) (217, Fig. 89).

**Derivation** (Clifford & Bostock 2007): L. teres, narrow; folium, leaf. Leaf-blades narrow and generally rigid.

**Classification.** Subfamily Aristidoideae, Tribe: Aristideae.


**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, interrupted, 10–15 cm long. Primary panicle branches appressed or ascending, 2 -nate, 3–8 cm long, bearing 5–10 fertile spikelets on each lower

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 16–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

**Glumes.** Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 10–12 mm long, 0.66 length of upper glume, membranous, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume lanceolate, 16–17 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 1.5–2.5 mm long.

**Florets.** Fertile lemma linear, subterete, 10–12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma surface smooth or granulose. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 30–35 mm long limb. Lateral lemma awns present, 30–35 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus. Hilum linear.


**Aristida ternipes** Cav. *Ic*. 5: 46. (1799).


**TYPE** from Panama. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: L. Nie 532, Nov, Panama (MA; IT: F (photo ex MA), MEXU (photo ex MA), US-81240 (fragm.)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 50–150 cm long, 1.5–4 mm diam., with 0.4–0.5 of their length below uppermost node. Culm-internodes solid, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades flat or involute, 25–50 cm long, 3–5 mm wide. Leaf-blade surface ribbed, scaberulous, glabrous, hairless except near base. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–1 mm long, pilose, acute. Floret callus hairs 2–3 mm long.

**Glumes.** Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume linear, 6.5–11.5 mm long, 0.8 length of upper glume, membranous, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acute, awned, 1 -awned, awn 1–2 mm long. Upper glume linear, 8–12 mm long, 0.5 length of adjacent fertile lemma, membranous, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acute, awned, 1 -awned, awn 1–2 mm long.

**Florets.** Fertile lemma linear, subterete, 15–22.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned or 3 -awned.
Principal lemma awn curved, 10–15 mm long overall, with 10–15 mm long limb, without a column. Lateral lemma awns absent or present, 0–3 mm long, shorter than principal. Palea 0.5–1.3 mm long.

**Flower and Fruit.** Anthers 3, 2.7 mm long. Caryopsis with adherent pericarp, linear, 7–8.5 mm long.

2n = 22 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America, South America.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 20–40 cm long, 1–1.5 mm diam., 3–4 -noded. Culm-internodes glaucous, smooth, distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaves mostly basal. Leaf-sheaths longer than adjacent culm internode, striately veined, smooth, glabrous on surface. Ligule a fringe of hairs. Collar glabrous. Leaf-blades involute, 10–25 cm long, 0.5–0.75 mm wide, stiff, glaucous. Leaf-blade surface scaberulous, glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 6–10 cm long, 0.3 cm wide. Primary panicle branches appressed, 1–2 cm long, bearing spikelets almost to the base. Panicle branches scaberulous, with insignificant pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, obtuse. Floret callus hairs 0.7 mm long.

**Glumes.** Glumes lower deciduous, upper persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.5–6 mm long, 0.9 length of upper glume, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Upper glume apex acute. Upper glume lanceolate, 6–7 mm long, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 5.5–6 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 3.5–4 mm long limb. Lateral lemma awns present, 0.5–1 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, linear, 4.5 mm long. Embryo 0.25 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.


TYPE from Brazil. Basionym or Replaced Name: Chaetaria torta Nees, Agrost. Bras. 386 (1829). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: K.F.P. von Martius s.n., no date, Brazil: Minas Gerais (M; IT: K (photo), LE-TR IN-1360.01 (fragm. & fig.), US-865706 (fragm. ex M & photo)).


Habit, Vegetative Morphology. Perennial. Culms 42–90 cm long. Lateral branches lacking. Leaf-sheath oral hairs scanty or bearded (deciduous hairs). Ligule a ciliolate membrane, 0.2 mm long. Collar glabrous. Leaf-blades straight, conduplicate, 8.5 cm long or 2–40 cm long, 1.5–4 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, sparsely hairy, hairy adaxially (at margins). Leaf-blade apex obtuse, smooth.

Inflorescence. Inflorescence a panicle. Panicle contracted (or subcontracted), 9–30 cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight, 0.2 mm long, pilose, obtuse.

Glumes. Glumes persistent, dissimilar (lower generally shorter than upper, sometimes subequal or lower longer than upper). Lower glume lanceolate, 7.5–9 mm long, 1 -veined. Lower glume primary vein scabrous. Lower glume surface scabrous, rough on veins. Lower glume apex acute, muticous or awned (shortly). Upper glume lanceolate, 4.5–8 mm long, 1 -veined. Upper glume surface smooth. Upper glume apex entire, acute, muticous or awned (shortly).

Florets. Fertile lemma subterete, 3.5–5 mm long, without keel, rounded throughout, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn curved, recurved at base of limb (generally), simple at base, with 7–17 mm long limb, without a column. Lateral lemma awns present, ascending, 5–11.5 mm long (1/3–2/3 the length of the principal awn), shorter than principal (conspicuously).

Distribution (TDWG). Continent. South America.


Derivation (Clifford & Bostock 2007): Gk. trachys, rough; anthos, flower. Lemmas scabrid.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 13–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 8–9.5 mm long, 0.66 length of upper glume, membranous. Lower glume apex acute. Upper glume linear, 13–15 mm long, membranous. Upper glume apex dentate, 2 -fid, acute, muticous or mucronate.

Florets. Fertile lemma linear, subterete, 10–12 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins involute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn straight, with 35–37 mm long limb. Lateral lemma awns present, 35–37 mm long, subequal to principal.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Illustrations (Books): L.K.A. Chippindall, Grasses and Pastures of South Africa (1955) (310, Fig 275).


Derivation (Clifford & Bostock 2007): L.-ensis, denoting origin. From the Transvaal, South Africa.


Inflorescence. Inflorescence a panicle. Panicle open, linear or lanceolate, 4–8 cm long. Spikelets solitary, Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–11.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose, obtuse.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5–9 mm long, 0.66 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scaberulous. Lower glume lateral veins absent. Lower glume apex acute, awned, 1 -awned. Upper glume lanceolate, 6.5–10 mm long, -0.6–0.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins absent. Upper glume apex truncate, mucronate.

Florets. Fertile lemma elliptic, subterete, 10–11.5 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface granulose. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 6–13 mm long limb, with twisted column, persistent. Column of lemma awn 1–6 mm long. Lateral lemma awns present, 1–8 mm long, shorter than principal. Palea without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, linear.

**Country /Province /State. Southern Africa.** Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Kwazulu-Natal.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): *L. tria*, three; *cornu*, horn. Awn terminally divided into three short segments.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 5–20 cm long. Ligule a fringe of hairs. Leaf-blades involute, 1–5 cm long, 1 mm wide, coriaceous, stiff. Leaf-blade surface ribbed.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or oblong, 2–8 cm long, contracted about primary branches. Primary panicle branches appressed or ascending, simple, 1–2 cm long, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pubescent, with longer hairs above, acute.

**Glumes.** Glumes persistent, similar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 4.5–6.5 mm long. 0.8–0.9 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 5.5–7 mm long, 0.9–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, subterete, 6–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough in lines. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn spreading, flat below (0.5–0.6mm wide), stiff, pungent, with 10–20 mm long limb, without a column, persistent. Lateral lemma awns present, spreading as much as principal, 8–15 mm long, shorter than principal. Palea without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State. Arabian Peninsula.** Saudi Arabia, Yemen.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 636).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 12–22 cm long, 0.5–1 mm diam., 1–2 -noded. Leaves mostly basal. Leaf-sheaths loose, 2.5–4 cm long. Leaf-sheath oral hairs lacking or ciliate. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades involute, 3.5–7 cm long, 1–2 mm wide, glaucous.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 3.5–7.5 cm long. Primary panicle branches 1–2 -nate, bearing 2–4 fertile spikelets on each lower branch. Panicle axis scaberulous. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 1–10 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse. Floret callus hairs 0.5 mm long.
Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–8 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acuminate. Upper glume lanceolate, 7–10 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, subterete, 6.5–8 mm long, coriaceous, dark brown or black, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn straight, with 4–8 mm long limb, persistent. Lateral lemma awns present, 0.5–3.5 mm long, shorter than principal. Palea 1.5–2 mm long, 0.2 length of lemma, 2 -veined, without keels. Palea apex obtuse.

Flower and Fruit. Lodicules 2, 1.2 mm long, veined, glabrous. Anthers 3, 3–3.5 mm long. Caryopsis with adherent pericarp, fusiform, sulcate on hilar side, 5 mm long.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 14–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1 mm long, pilose, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.5–8 mm long, 0.4–0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute or acuminate, mucronate. Upper glume lanceolate, 14–16 mm long, 3.5–5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 1–5 mm long.

Florets. Fertile lemma elliptic, subterete, 3–4.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 40–60 mm long limb, with twisted column, deciduous, abscissing from top of column. Column of lemma awn 20–25 mm long. Lateral lemma awns present, 25–35 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

Flower and Fruit. Anthers 3.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 635).

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 20–30 cm long, 0.5–1 mm diam., 1–2 -noded. Leaves mostly basal. Ligule a fringe of hairs. Leaf-blades involute, 3–6 cm long, 1–2 mm wide.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 10 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–7 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 9–12 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic, subterete, 7–9 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 10–12 mm long limb, with twisted column, persistent. Column of lemma awn 2 mm long. Lateral lemma awns present, 7 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central, Tibet. Yunnan.


**TYPE** from USA. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: in the sandy pine forests of Georgia, a few miles from Augusta.


**Derivation** (Clifford & Bostock 2007): L. *tuberculus*, wart; -osa, abundance. Lemmas or glumes bearing warty projections.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Butt sheaths villous. Culms erect, 24–50 cm long. Lateral branches ample, arising from lower culm. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Ligule a fringe of hairs. Leaf-blades involute, 10–20 cm long, 1–3 mm wide. Leaf-blade surface ribbed, scabrous, rough adaxially. Leaf-blade margins scabrous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3–4 mm long, pubescent, pungent.

**Glumes.** Glumes similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume linear, 6–12 mm long, 1 length of upper glume, membranous. Lower glume apex acute,
awned, 1 -awned, awn 3–6 mm long. Upper glume linear, 6–12 mm long, membranous. Upper glume apex acute, awned, 1 -awned, awn 3–6 mm long.

**Florets.** Fertile lemma linear, subterete, 11–13 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, spreading or recurved at base of limb, with 20–40 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 10–15 mm long. Lateral lemma awns present, spreading as much as principal, 30–40 mm long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.


**TYPE** from Mexico. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Jalisco: Mun. El Tuito, 9 a 10 km sobre la brecha a las Minas del Cuale (E de El Tuito), elev. 1900 m, 13 Jan 1991, J. Sanchez-Ken, M. Mayfield & B. Westlund 500 (HT: MEXU; IT: ENCB, IBUG, MICH, MO).

**Illustrations (Journals):** *Novon* (5:191, Fig.1 (1995)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 1–2 mm diam., 9–15 -noded. Culm-internodes terete, 2–12 cm long, distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths 3–9 cm long, longer than adjacent culm internode, indistinctly veined, glabrous on surface. Ligule a fringe of hairs, 0.2–0.3 mm long. Leaf-blades straight or flexuous, flat, 10–50 cm long, 2–4 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Peduncle 11–30 cm long, smooth or scaberulous above. Panicle open, ovate, effuse, 14–35 cm long, 12–20 cm wide, with spikelets clustered towards branch tips. Primary panicle branches spreading, 9–15 cm long. Panicle branches with prominent pulvini. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 5–18 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.7–1 mm long, pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–8 mm long, 0.7–0.9 length of upper glume, membranous, 3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins obscure. Lower glume surface glabrous. Lower glume apex acute, mucronate or awned, 1 -awned, awwn 0.5–2 mm long. Upper glume lanceolate, 6–7.5 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex obtuse, mucronate or awned, 1 -awned, awwn 0.5–1 mm long.

**Florets.** Fertile lemma linear, subterete, 4.5–6 mm long, 1–1.3 mm wide, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, with twisted column. Column of lemma awn 6–10 mm long. Palea 0.5–0.7 mm long.

**Flower and Fruit.** Lodicules 2, 1–1.2 mm long. Anthers 3, 3–4 mm long.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Southwest Mexico.

Jalisco.


TYPE from Uruguay. T:<Type of Basionym> fide TROPICOS and Kew Synonomy Database: HT: Sello s.n., Sep 1823, Uruguay: San Josi do Uruguay (B).

Illustrations (Books): A. Burkat, Flora Ilustrada de Entre Rios (Argentina), Pt II, Gramineas (1969) (215, Fig. 79 & as var. uruguayensis), B. Rosengurtt, Gramineas Uruguayas I (1970) (214, Fig. 88), F. O. Zuloaga, Z. E. Rugolo & A. M. Anton, Flora Argentina 3 – 1, Aristidoideae a Pharoideae (2012) (44, var. laevis & var. uruguayensis).


Habit, Vegetative Morphology. Perennial. Culms 27–50(–73) cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades curved, conduplicate, 15–35 cm long or 0 cm long. 1.8 mm wide or 0.2–3.2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute, antrorsely scabrous.

Inflorescence. Inflorescence a panicle. Panicle open, 15–24(–28) cm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.7–0.8 mm long, pilose, acute (subacute).


Florets. Fertile lemma laterally compressed, 13–18 mm long, keeled, distinctly keeled, keeled above, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness or scabrous. Lemma surface smooth, without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 75–130 mm long limb, without a column. Lateral lemma awns present, ascending, 75–130 mm long, subequal to principal.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Argentina Northeast, Uruguay.


Illustrations (Journals): Austr. Syst. Bot. (5: 151, Fig.1 (1992)).


Habit, Vegetative Morphology. Perennial, caespitose. Culms 53–130 cm long. Culm-internodes smooth or scaberulous, distally pubescent. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate, 1.5–3 mm long. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades curled or flexuous, involute, 10–21 cm long, 1.5–2 mm wide. Leaf-blade surface smooth or scaberulous, glabrous or pubescent, hairy adaxially.
**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, 15–48 cm long, 1–6 cm wide. Primary panicle branches 2–3-nate, 4–8.5 cm long, naked below or bearing spikelets almost to the base. Panicle branches scabrous, glabrous or pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8.5–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4–0.7 mm long, pubescent, acute. Floret callus hairs 1 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7.3–16 mm long, 0.9 length of upper glume, membranous, 1-keeled, 3–5-veined. Lower glume surface smooth to scabrous. Lower glume apex acute or acuminate, awned, 1 -awned, awn 2.5–4 mm long. Upper glume lanceolate, 8.3–17 mm long, 0.9–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate, awned, 1 -awned, awn 2.5–4 mm long.

**Florets.** Fertile lemma lanceolate, subterete, 8–20 mm long, coriaceous, without keel, 3 -veined, 0–3-veined. Lemma surface scabrous, rough above, glabrous or pubescent, hairy above. Lemma margins involute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn geniculate or 3-branched, with 9–31 mm long limb, with twisted column, persistent. Column of lemma awn 5–9 mm long, glabrous or puberulous. Lateral lemma awns absent or present, 0–10 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, sulcate on hilar side. Hilum linear, 0.25 length of caryopsis.

**Distribution (TDWG). Continent.** Tropical Asia, Australasia.


**Aristida vagans** Cav. Ic. 5: 45. t. 471. (1799).


**TYPE from Australia. T:** <Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Anon. s.n., Australia: New South Wales: Central Coast, Port Jackson (MA (photo, BRI)).


**Illustrations (Journals):** Austr. Syst. Bot. (5: 197, Fig.11 (1992)).


**Derivation (Clifford & Bostock 2007):** L. vago, wander. Culms much branched.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 38–85 cm long, 2–3 -noded. Culm-internodes smooth, distally glabrous. Lateral branches lacking or sparse or ample. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs pubescent or ciliate. Ligule a fringe of hairs, 0.5 mm long. Collar glabrous. Leaf-blades flat or involute, 5–10 cm long, 1 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 6–11.5 cm long, 3–4 cm wide. Primary panicle branches 2–5 cm long. Panicle branches with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8.5–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, pubescent, acute.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.5–7 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex cuspidate. Upper glume lanceolate, 3.5–7 mm long, 0.4–0.6 length
of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper
glume apex emarginate or obtuse.

**Florets.** Fertile lemma lanceolate, subterete, 8.5–12 mm long, coriaceous, without keel, 3 -veined, 0–3
-veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned.
Principal lemma aawn with 6–9.5 mm long limb, without a column, persistent. Lateral lemma awns present,
4–8 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 6–9 mm long. Hilum linear, 0.3–0.4
length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. New South Wales, A.C.T., Queensland.
Central, South East. Coast, Tablelands, Western Slopes, Western Plains.


**Accepted by:** R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online,

**TYPE** from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *J.T.
Howell 8448*, 29 Mar 1932, Mexico: Colima: dry slopes, north anchorage, Socorro Island, Revillagigedo
Islands (CAS-211474; IT: US-1611669).

**Illustrations:** None found.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 100 cm long, 2.4 mm diam. Leaf-
sheaths tight, wider than blade at the collar, without keel, glabrous on surface. Leaf-sheath oral hairs ciliate.
Ligule a fringe of hairs. Leaf-blades flat, 1–3 mm wide. Leaf-blade surface ribbed, scabrous, rough
adaxially, glabrous, hairless throughout or except near base. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 30 cm long. Primary panicle
branches appressed, 5–8 cm long. Panicle axis scabrous. Spikelets appressed, solitary. Fertile spikelets
pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1
fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets linear, subterete, 11 mm long, breaking up at maturity,
disarticulating below each fertile floret. Floret callus evident, winged, with this appendage 0.5 mm long,
pubescent, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume
lanceolate, 10 mm long, 0.9 length of upper glume, membranous, 3 -veined. Lower glume surface scabrous.
Lower glume apex setaceously acuminate. Upper glume lanceolate, 11 mm long, membranous. Upper
glume surface asperulous. Upper glume apex setaceously acuminate.

**Florets.** Fertile lemma linear, subterete, 6–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined.
Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex
awned, 3 -awned. Principal lemma aawn geniculate, with 20–35 mm long limb, with a straight or slightly
twisted column, persistent. Column of lemma aawn 2–3 mm long. Lateral lemma awns present, 20–35 mm
long, subequal to principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Southwest Mexico.
Colima, Jalisco.


**Accepted by:** R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online,


**TYPE** from Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Venezuela: in savannas ad Caracas, 1891–1892, Dr. E. Warming s.n. (HT: C).

**Illustrations (Books):** G. Harling & C. Persson, *Flora of Ecuador* (2006) (57: 50, Fig. 9 (1997)).

**Derivation** (Clifford & Bostock 2007): from Venezuela.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms erect, 11–13 cm long, 1 mm diam. Culm-internodes scaberulous. Lateral branches lacking or sparse. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs. Leaf-blades convolute, 8–10 cm long, 2 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex acuminate, firm.

**Florets.** Fertile lemma linear, subterete, 6–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 20 mm long limb. Lateral lemma awns present, 10–15 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus. Hilum linear.

**Distribution (TDWG).** Continent. South America.

Country /Province /State. Northern South America, Western South America. Venezuela. Colombia, Ecuador, Peru.


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial. Culms 20–35(–45) cm long. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.2 mm long. Collar glabrous. Leaf-blades curved, conduplicate, 5–18 cm long, 0.5–0.8(–1.2) mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, hairless except near base, sparsely hairy, hairy adaxially. Leaf-blade apex acute, antrorsely scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open (pauciflore), 8–20 cm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 0.7–1 mm long, pilose, acute (subacute).


**Florets.** Fertile lemma laterally compressed (slightly), 11–18 mm long, keeled (slightly ABOVE), 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma surface smooth or scabrous, rough above (2/3), without grooves. Lemma margins convolute. Lemma apex awned, 3 -awned. Principal lemma awn straight, ascending, simple at base, with 55–90(–100) mm long limb, without a column. Lateral lemma awns present, ascending, 55–90(–100) mm long, subequal to principal.

**Distribution (TDWG).** Continent. South America.

Country /Province /State. Brazil, Southern South America, Western South America (Bolivia). Bolivia. Brazil South. Argentina Northeast, Paraguay, Uruguay.


Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to *Aristida venustula*.


Habit, Vegetative Morphology. Perennial. Basal innovations extravaginal or intravaginal. Culms erect, 35–40 cm long, with 0.1–0.2 of their length below uppermost node. Leaf-sheaths longer than adjacent culm internode. Leaf-sheath oral hairs ciliate, 3 mm long. Ligule a fringe of hairs. Leaf-blades filiform, conduplicate, 4–15 cm long, 1–1.5 mm wide. Leaf-blade surface scaberulous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 20–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75 mm long, acute.


Florets. Fertile lemma linear, subterete, 11–13 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 50–65 mm long limb. Lateral lemma awns present, 50–65 mm long, subequal to principal.

Flower and Fruit. Anthers 3.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous or woolly. Culms 40–120 cm long. Culm-internodes distally pubescent or woolly. Leaf-sheath oral hairs woolly. Ligule a fringe of hairs. Leaf-blades flat or convolute, 20–40 cm long, 2–4 mm wide.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pilose, truncate or 2-toothed.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–7 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 9–13 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate.

Florets. Fertile lemma elliptic, subterete, 7–11 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 20–35 mm long limb, with twisted column, deciduous, abscissing from top of lemma. Column of lemma awn 2–7 mm long. Lateral lemma awns present, 15–30 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.
**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent: Africa.


**TYPE** from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *L.R. Parodi 3288*, 15 Jan 1920, Argentina: Santa Fi; Santo Tomi (L-9 27.320–292; IT: US-81234 (fragm. ex L)).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *vexatio*, trouble; -iva, indicating capacity.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 15–30 cm long, 0.5 mm diam. Lateral branches lacking. Leaf-sheaths tight, striatedly veined, glabrous on surface. Leaf-sheath oral hairs pubescent or ciliate. Ligule a fringe of hairs. Leaf-blades flexuous, conduplicate, 1 mm wide, glaucous. Leaf-blade surface scaberulous, rough adaxially or on both sides. Leaf-blade margins unthickened. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, interrupted, 15 cm long. Primary panicle branches appressed, 2-nate, 2–4 cm long. Panicle axis smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 19–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 9–10 mm long, 0.5 length of upper glume, membranous, 1 -veined. Lower glume primary vein ciliate. Lower glume lateral veins absent. Lower glume apex awned, 1 -awned. Upper glume linear, 19–20 mm long, 2 length of adjacent fertile lemma, membranous, 1–3 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent or obscure. Upper glume apex acuminate, awned, 1 -awned.

**Florets.** Fertile lemma linear, subterete, 8–11 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn with 70 mm long limb. Lateral lemma awns present, 70 mm long, subequal to principal. Palea hyaline, 0 -veined.

**Flower and Fruit.** Lodicules 2. Anthers 3. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: South America.

**Country/Province/State.** Southern South America. Argentina Northeast.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 207, Fig.13 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.
**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 20–45 cm long, 2–4 -noded. Culm-internodes smooth, distally glabrous. Lateral branches sparse. Ligule a fringe of hairs, 0.3–0.7 mm long. Leaf-blades flexuous, filiform, involute, 4–16 cm long, 0.5 mm wide. Leaf-blade surface scabrous, rough adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, effuse, 12–15 cm long, 3–5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 12–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.2 mm long, pubescent, pungent. Floret callus hairs 1.2 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–10 mm long, 0.66–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume lanceolate, 12–13 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 10 mm long, coriaceous, pallid or light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scabrous, rough above. Lemma margins involute or convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn with 33–37 mm long limb, without a column, persistent. Lateral lemma awns present, 30–35 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3, 2 mm long. Caryopsis with adherent pericarp. Hilum linear.


**Illustrations (Journals):** *Darwiniana* (41: 185, fig.11 (2003)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 6–20 cm long. Leaf-sheaths striately veined, scaberulous, glabrous on surface. Leaf-sheath oral hairs ciliate, 1.5 mm long. Ligule a fringe of hairs, 0.3 mm long. Leaf-blades straight or curved, convolute, 1–7 cm long, 0.5–2 mm wide, stiff. Leaf-blade surface scaberulous or scabrous, rough adaxially. Leaf-blade margins scaberulous. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, interrupted, 3–8 cm long, 0.4–0.7 cm wide, bearing few spikelets. Primary panicle branches naked below or bearing spikelets almost to the base. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, angular, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–0.6 mm long, pilose, obtuse.

**Glumes.** Glumes similar, with lower wider than upper, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5.5–8.5 mm long, 0.9–1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acute, muticous or mucronate. Upper glume lanceolate, 6–9.5 mm long,
0.9–1 length of adjacent fertile lemma, membranous, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 1–1.3 mm long.

**Florets.** Fertile lemma linear, subterete, 6.5–8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn 3-branched, with 3.5–7.5 mm long limb, with a straight or slightly twisted column. Column of lemma awn 1.5–2.8 mm long. Lateral lemma awns present, ascending, 2–5 mm long, shorter than principal, lemma awns 0.66 length of principal. Palea 1.5–1.7 mm long, 2 -veined. Palea apex dentate, 2 -fid.

**Flower and Fruit.** Lodicules 2, 1–1.3 mm long. Anthers 3. Caryopsis with adherent pericarp, fusiform, without sulcus, 3.5–5.5 mm long, dark brown. Embryo 0.2–0.33 length of caryopsis. Hilum linear.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *folium*, leaf. Leaf-blades like those of *Vilfa*.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Culms erect, 30–60 cm long, wiry. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades curved or flexuous, flat or involute, 3–5 cm long, 0.5–1 mm wide. Leaf-blade margins cartilaginous.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long. pubescent, pungent.

**Glumes.** Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 6–8 mm long, 1 length of upper glume, membranous, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume linear, 6–8 mm long, membranous, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute.

**Florets.** Fertile lemma linear, subterete, 6–7 mm long, coriaceous, 3 -veined, 0–3 -veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 3 -awned. Principal lemma awn spreading, with 10–15 mm long limb. Lateral lemma awns present, spreading less than principal, 6–10 mm long, shorter than principal.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Bahamas, Cuba, Dominican Republic, Haiti.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *villi*, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.
**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 15–35 cm long, 3–6-noded. Culm-internodes terete, distally pubescent. Culm-nodes flush with internodes, glabrous. Lateral branches lacking or sparse. Leaf-sheaths mostly shorter than adjacent culm internode, hirsute. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Collar glabrous or pubescent. Leaf-blades flat or convolute, 5–12 cm long, 2.5–3 mm wide, glaucous. Leaf-blade surface scaberulous, rough on both sides, pubescent, hairy on both sides. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pilose, obtuse.


**Florets.** Fertile lemma ovate, suberete, 4 mm long, coriaceous, without keel, 3-veined, 0–3-veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3-awned. Principal lemma awn 3-branched, with 9–15 mm long limb, with a straight or slightly twisted column, deciduous, abscissing from top of column. Column of lemma awn 1 mm long. Lateral lemma awns present, 5–6 mm long, shorter than principal.

**Distribution (TDWG).** Continent: South America.

**Country/Province/State.** Western South America. Galapagos.

**Aristida warburgii** Mez. Fedde, Repert. 17: 149 (1921).


**TYPE from Australia.** T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: E.F. Warburg 19535, no date, Australia: Queensland: Wide Bay Dist.: near Maryborough (B; IT: BRI (fragm. & photo ex B), US-2489454 (fragm. ex B)). Collection no. is annotated on sheet, but not cited in publication.


**Illustrations (Journals):** *Austr. Syst. Bot.* (5: 188, Fig.9 (1992)).


**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–90 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate or bearded. Ligule a fringe of hairs, 0.3 mm long. Collar glabrous or pubescent. Leaf-blades filiform, involute, 8–16 cm long, 1 mm wide.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 8.5–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.2–2 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–11.5 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 3–7-veined. Lower glume apex obtuse. Upper glume lanceolate, 8.5–17 mm long, 1.2–1.5 length of adjacent fertile...

**Florets.** Fertile lemma lanceolate, subterete, 7–11 mm long, coriaceous, pallid or light brown, mottled with last colour, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth or scabrous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, reflexed, with 17–33 mm long limb, with twisted column, persistent. Column of lemma awn 5–17 mm long. Lateral lemma awns present, spreading less than principal, 12–28 mm long, shorter than principal. Palea 0.2 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp, 6–7 mm long. Hilum linear.

**Distribution (TDWG).** Continent. Tropical Asia, Australasia.

**Country /Province /State.** Papuaasia. New Guinea PNG. New Guinea. **Australia.** New South Wales, Queensland.

North, South East. Coast, Tablelands, Western Slopes.


**Accepted by:** W.D.Clayton & K.Harman, **GrassBase** (2008) and online.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Hiram Wild (d.1982), ex Chief Botanist, National Herbarium of Rhodesia and University of Rhodesia.

**Classification.** Subfamily Aristidoideae. Tribe: Aristideae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 35–55 cm long, 3–4 -noded. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades convolute, 10–22 cm long, 1–1.5 mm wide. Leaf-blade surface pubescent, hairy adaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, effuse, 20–22 cm long. Primary panicle branches spreading or reflexed, 1–2 -nate, 3–6 cm long, bearing 1–3 fertile spikelets on each lower branch. Panicle branches glandular (in axils), scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without racilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10.5–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long. pilose, obtuse.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 7–9 mm long, 1.2 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 6–7.5 mm long, 0.6–0.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume apex erose, obtuse.

**Florets.** Fertile lemma elliptic, subterete, 10.5–11 mm long, coriaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 3 -awned. Principal lemma awn 3-branched, with 11–16 mm long limb, persistent. Lateral lemma awns present, 6–13 mm long, shorter than principal. Palea 0.1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Southern Africa. Botswana.


**Accepted by:** W.D.Clayton & K.Harman, **GrassBase** (2008) and online, U.Quattrocchi, **CRC World Dictionary of Grasses** (2006), T.G.Tutin et al, **Flora Europaea** 5 (1980).


**Illustrations:** None found.
**Derivation** (Clifford & Bostock 2007): L. white. Usually of spikelets, often due to the pale indumentum.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Stolons present. Culms 50–125 cm long, swollen at the base, forming an ovoid corm or moniliform corms. Culm-nodes glabrous or bearded. Leaf-sheaths glabrous on surface or hirsute. Ligule an eciolate membrane, 1–5 mm long, lacerate. Leaf-blades 20–40 cm long, 4–8 mm wide. Leaf-blade surface scabrous, glabrous or hirsute.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 9–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated between glumes or elongated below proximal fertile floret. Rhachilla elongation 1.5–1.8 mm long (below floret). Floret callus pilose.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume lanceolate, 6–8.3 mm long, 0.66 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 9–11 mm long, 1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 7–10.5 mm long, chartaceous, much thinner above, pilose, hairy below, dentate, 2 -fid, acute or acuminate, awned. Awn of lower sterile floret dorsal, arising 0.1 way up back of lemma, geniculate, 15–25 mm long. Fertile lemma oblong, 7–10.5 mm long, chartaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma hairs 2–3 mm long. Lemma apex acuminate, muticous or mucronate or awned, 1 -awned. Principal lemma awn subapical, 0–5 mm long overall. Palea keels ciliate.

**Flower and Fruit.** Anthers 3, 3.3–4.7 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp, 3.5–4 mm long.

\[ n = 7 \] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia.

**Region.** Northern Europe (*). Southwestern Europe.


**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 50–100 cm long, 3–4 -noded. Ligule an eciolate membrane, 3–4 mm long, erose, truncate or obtuse. Leaf-blades 10–20 cm long, 3–4 mm wide, glaucous. Leaf-blade surface scaberulous, rough abaxially. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear or lanceolate, 8–9 cm long. Primary panicle branches bearing 1–3 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume lanceolate, 6.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -
Arrhenatherum elatius

veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 6.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3-veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret ovate, 7–8 mm long, 1 length of fertile lemma, chartaceous, much thinner above, 7-veined, dentate, 2-fid, awned. Awn of lower sterile floret dorsal, arising 0.1 way up back of lemma, geniculate, 15–18 mm long. Palea of lower sterile floret 5 mm long. Fertile lemma lanceolate, 7–8 mm long, chartaceous, much thinner above, without keel, 7-veined, more than 3-veined. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn subapical, straight, 3–6 mm long overall. Palea keels ciliolate.

Flower and Fruit. Anthers 3, 4 mm long, pallid or yellow. Ovary pubescent all over. Caryopsis with adherent pericarp, lanceolate, 5 mm long, hairy all over.


Basionym or Replaced Name: Avena elatior L., Sp. Pl. 1: 79 (1753). T<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Europe: In Europae maritimis & apricis,.


Habit. Vegetative Morphology. Perennial, caespitose. Culms erect, 50–180 cm long, 3–5 -noded, not swollen at the base or swollen at the base, forming moniliform corms. Culm-nodes glabrous or pubescent. Leaf-sheaths without keel, smooth or scaberulous, glabrous on surface or pilose. Ligule an eciliate membrane, 0.5–2 mm long. Leaf-blades 10–40 cm long, 4–10 mm wide. Leaf-blade surface scaberulous, pilose, sparsely hairy, hairy adaxially.
**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate or oblong, equilateral or nodding, 10–30 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform or linear, 1–10 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 7–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret. Floret callus pilose.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume lanceolate, (3–)4–6(–7) mm long, 0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 7–11 mm long, 0.9–1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret ovate, 0.9 length of fertile lemma, chartaceous, much thinner above, 7 -veined, glabrous or pilose, hairy below, dentate, 2-fid, awned. Awn of lower sterile floret dorsal (on lower third of lemma), geniculate, 10–20 mm long. Fertile lemma obovate, 7–10 mm long, chartaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface glabrous or pilose, hairy below. Lemma apex dentate, 2-fid, muticus or awned, 1 -awned. Principal lemma awn subapical, straight or geniculate, 2–10.5 mm long overall. Palea keels ciliolate.

**Flower and Fruit.** Anthers 3, 3.7–5.2(–5.5) mm long. Ovary pubescent all over.

2n = 28 (7 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America, South America.

**Region.** Northern Europe. Middle Europe. Southwestern Europe. Southeastern Europe. Eastern Europe.


T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Iran, Persepolis: Kotschy 272 (G syn, E); Iran, Persepolis: Kotschy 287 (G syn).


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes elongated. Culms erect, 17–30(–100) cm long, 1–2 -noded, not swollen at the base or swollen at the base, forming an ovoid corm. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.5–2.5 mm long, truncate or obtuse. Leaf-blades 6–25 cm long, 1–4 mm wide. Leaf-blade surface smooth or scabrous. Leaf-blade apex acuminate.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 12–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes elongated below proximal fertile floret. Rachilla elongation 1.5–2 mm long, pilose (hairs 5–7mm). Floret callus pilose.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume lanceolate, 6.5–9 mm long, 0.5–0.66 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 12–13.5 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 13–15 mm long, chartaceous, much thinner above, 7 -veined, villous, dentate, 2 -fid, setaceousy acuminate (lateral awns 1–2.5mm), awned. Awn of lower sterile floret dorsal, arising 0.1 way up back of lemma, geniculate, 25–40 mm long. Fertile lemma elliptic, 9–10 mm long, chartaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface villous. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn subapical, 10–16 mm long overall.Palea keels ciliate.

Flower and Fruit. Anthers 3, 2.3–4.6 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp, oblong.

Country /Province /State. Caucasus, Western Asia. Iran, Iraq.

Arrhenatherum longifolium (Thore) Dulac, Fl. Hautes-Pyr. 78 (1867).


Basionym or Replaced Name: Avena longifolia Thore, Prom. Golfe Gascogne 92 (1810)


Illustrations: None found.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret. Floret callus pilose. Floret callus hairs 0.1 length of lemma.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume lanceolate, 5–6 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins obscure. Lower glume apex acuminate. Upper glume lanceolate, 6–7 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 7–9 mm long, chartaceous, much thinner above, pubescent, dentate, 2 -fid, acute or acuminate, awned. Awn of lower sterile floret dorsal, arising 0.66 way up back of lemma, geniculate, 7–9 mm long. Fertile lemma elliptic, 6–7 mm long, chartaceous, much thinner above, without keel, 5–7 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acuminate, mucronate or awned, 1 -awned. Principal lemma awn subapical. Palea 4–5 mm long. Palea keels ciliolate.

**Flower and Fruit.** Anthers 3, 3–4 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp, oblong, dorsally compressed, sulcate on hilar side, 2.5–3 mm long. Embryo 0.1 length of caryopsis. Hilum linear, 0.33 length of caryopsis.


**Arrhenatherum palaestinum** Boiss. Diagn. Ser. 1, 8: 51 (1854).


**TYPE** from Palestine. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Palestine: Boissier (G holo).

**Illustrations (Books):** N.Feinbrun-Dothan, Flora Palaestina 4 (1986) (Pl. 252).

**Derivation** (Clifford & Bostock 2007): from Palestine.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 17–55(–100) cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2–3 mm long, pubescent on abaxial surface, obtuse. Leaf-blades 5–22 cm long, 1.4–4.5 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, 7–27 cm long, 2–6 cm wide. Primary panicle branches 3–4 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–15 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 11–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla elongation 1–2.5 mm long. Floret callus pilose.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume lanceolate, 5.5–6.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 9–12 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 8–14 mm long, chartaceous, much thinner above, dentate, 2 -fid, acute or acuminate, awned. Awn of lower sterile floret dorsal, arising 0.1 way up back of lemma, geniculate, 20–28 mm long. Fertile lemma elliptic, 8.1 mm long, chartaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acuminate, muticous or awned, 1 -awned. Principal lemma awn subapical, 4.5–6 mm long overall. Palea keels ciliolate.

**Flower and Fruit.** Anthers 3, 3.5–5.5 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp.
\(2n = 14\) (1 ref TROPICOS), or 28 (1 ref TROPICOS).

**Distribution (TDWG). Continent.** Europe, Temperate Asia.

**Region. Southeastern Europe.**

**Country /Province /State.** : Bulgaria, Greece, Crete, Yugoslavia. **Western Asia.** East Aegean Is, Lebanon-Syria, Palestine, Israel & Jordan, Turkey.


**Basionym or Replaced Name:** *Avena pallens* Link, *J. Bot. (Schrader)* 2: 314 (1799).


**Illustrations:** None found.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–70 cm long. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliat e membrane. Leaf-blades filiform, convolute, 0.6–0.8 mm wide. Leaf-blade surface ribbed, glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, dense, 5–12 cm long. Primary panicle branches bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 9–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret. Floret callus pilose.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume lanceolate, 7–8 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins obscure. Lower glume apex acuminata. Upper glume lanceolate, 9–10 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acuminata.

**Florets.** Basal sterile florets 1, male, with palea, attached to and deciduous with the fertile. Lemma of lower sterile floret elliptic, 7–8 mm long, chartaceous, much thinner above, pubescent, dentate, 2 -fid, acute or acuminate, awned. Awn of lower sterile floret dorsal, arising 0.5–0.8 way up back of lemma, geniculate, 12–15 mm long. Fertile lemma elliptic, 7–8 mm long, chartaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acuminate, muticous or awned, 1 -awned. Principal lemma awn subapical, 0–2 mm long overall. Palea 6–7 mm long. Palea keels ciliate.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** Europe.

**Region. Southwestern Europe.**

**Country /Province /State.** : Portugal.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paniceae. Subtribe Panicinae.

**Habit, Vegetative Morphology.** Annual. Culms 40–80 cm long. Ligule a ciliolate membrane. Leaf-blades 2–9 cm long, 1–2.8 mm wide. Leaf-blade surface ribbed, pilose. Leaf-blade margins cartilaginous, ciliate, hairy at base.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 6–7.5 mm long, 1–1.5 mm wide, falling entire. Rachilla internodes elongated between glumes or elongated below proximal fertile floret. Rachilla elongation slender.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 3–4 mm long, 0.5–0.6 length of spikelet, membranous, without keels, 7 -veined. Lower glume apex obtuse or acute, mucronate. Upper glume elliptic, 5.5–7 mm long, 0.9 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume lateral veins ribbed. Upper glume apex acuminate, awned, 1 -awned, awn 1–2 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, acuminate, awned, awn of lower sterile floret 1–2 mm long. Fertile lemma elliptic, 1.5 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Pala indurate.

Flower and Fruit. Anthers 3. Hilum punctiform.


Illustrations: None found.


Habit, Vegetative Morphology. Annual. Culms 30–70 cm long, 3–5 -noded. Ligule a ciliate membrane, 0.5–0.7 mm long. Leaf-blades 3–9 cm long, 2–4 mm wide.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, dorsally compressed, 2–5.2 mm long, with hairs extending 0.6–1.5 mm beyond apex, falling entire. Rachilla internodes elongated below proximal fertile floret. Rachilla elongation slender.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate or ovate, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex obtuse. Muticous. Upper glume lanceolate or ovate, membranous, without keels, 5–7 -veined. Upper glume apex acute, muticous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, muticous. Fertile lemma elliptic, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex obtuse.


TYPE from Australia, Queensland. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Cook Dist.: 16 km from Meripah homestead on road to the south, 13.49S 142.22E, 11 May 1987, J. R. Clarkson & B. K. Simon 7149 (htype: BRI-AQ452649; IT: MBA, NSW).

Illustrations (Journals): \textit{Austrobaileya} (3:586, Fig.1 (1992)).


Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms erect or geniculately ascending, slender, 40–80 cm long, 2–4 -noded. Lateral branches sparse. Leaf-sheaths without keel. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades lanceolate, 3–10 cm long, 20 mm wide. Leaf-blade surface pilose. Leaf-blade margins smooth, tuberculate-ciliate.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, 3.5–4 mm long, falling entire. Rhachilla internodes elongated between glumes or elongated below proximal fertile floret. Rhachilla elongation slender.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume elliptic or ovate, 3.5–4 mm long, 1 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume surface pilose, hairy below, with tubercle-based hairs. Upper glume elliptic, 3.5–4 mm long, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume surface pilose, hairy below, with tubercle-based hairs. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 3–3.5 mm long, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, 1.5 mm long, chartaceous, yellow, shiny, without keel. Lemma margins involute. Palea chartaceous.

Flower and Fruit. Anthers 3. Caryopsis 1.5 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.


Country /Province /State. Australia. Northern Territory, Queensland.
Darwin & Gulf. North.


Illustrations: None found.


Derivation (Clifford & Bostock 2007): Gk. \textit{-oides} resembling. Resembling \textit{Deschampsia}.


Habit, Vegetative Morphology. Annual. Culms 17–50 cm long, 4 -noded. Ligule a ciliolate membrane, 0.5–0.8 mm long. Leaf-blades 2–9 cm long, 1–2.8 mm wide. Leaf-blade surface ribbed, hirsute, with tubercle-based hairs. Leaf-blade margins cartilaginous, ciliate, hairy at base.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 4–5 mm long, falling entire. Rhachilla internodes elongated below proximal fertile floret. Rhachilla elongation slender.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 7 -veined. Lower glume surface scabrous. Lower glume
apex acute, muticous or awned, 1 -awned, awn 0–1.5 mm long. Upper glume lanceolate, 3–4.5 mm long, membranous, without keels, 7 -veined. Upper glume lateral veins ribbed. Upper glume surface scabrous. Upper glume apex acuminate, muticous or awned, 1 -awned, awn 0–2 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 9 -veined, ribbed, acuminate, muticous or awned. Awn of lower sterile floret 0–2.5 mm long. Fertile lemma elliptic, 1.5–1.7 mm long, indurate, shiny, without keel, 5–7 -veined. Lemma margins involute. Lemma apex obtuse.

**Flower and Fruit.** Anthers 3, 1 mm long. Caryopsis with free brittle pericarp, dorsally compressed, 1.2–1.4 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

**Distribution (TDWG).** Continent: Australasia.


**Inflorescence.** Inflorescence composed of racemes. Racemes 2–3, paired or digitate, 3–6 cm long. Rhachis fragile at the nodes, glabrous on margins or ciliate on margins. Rhachis internodes filiform, 4 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 0.2–0.5 mm long.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6–7.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base truncate, attached transversely.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma lanceolate, 2–2.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 10–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: Africa.
Country/Province/State: Western Indian Ocean. Madagascar.

**Arthraxon castratus** (Griff.) Nayaran. ex Bor. *Fl. Assam* 5: 376 (1940).


Derivation (Clifford & Bostock 2007): L. *castro*, castrate. Sessile spikelet of pair only one present.


Habit, Vegetative Morphology. Perennial. Culms rambling, 60–200 cm long. Culm-nodes glabrous. Leaf-sheaths hirsute, with tubercle-based hairs, outer margin hairy. Ligule a ciliolate membrane, 1.7–2.2 mm long. Leaf-blades lanceolate, 4–11 cm long, 7–15 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Peduncle pubescent above. Racemes 1–5, single or paired or digitate, flexuous, 2–4 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 0.4–1.5 mm long. Rhachis internodes linear, 4–5.8 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2–3 mm long, ciliate.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, attached transversely. Spikelet callus hairs 0.4–1.5 mm long.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 5.2–6.3 mm long, hyaline, ciliate on margins. Fertile lemma lanceolate, 4.4–5.3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 10–14 mm long overall, with twisted column. Column of lemma awn 6–8 mm long, glabrous. Palea present, 2.3–2.8 mm long. Palea surface pubescent, hairy on flanks.

Flower and Fruit. Anthers 3, 2.4–3.7 mm long. Caryopsis with adherent pericarp, ellipsoid, 3.3 mm long.

$\pi = 9$ (1 ref TROPICOS). $2n = 18$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia, Australasia.


Derivation (Clifford & Bostock 2007): L. *cuspis*, head of a spear; -ata, possessing. Glumes or lemmas long tapering or terminating in a sharp tip.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 40–45 cm long. Culm-nodes bearded. Lateral branches lacking or sparse. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades lanceolate, 3–7 cm long, 8–12 mm wide, flaccid. Leaf-blade surface pilose, sparsely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminated.

**Inflorescence.** Inflorescence composed of racemes. Racemes 4–5, digitate, 3–5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs lengthening towards internode tip, 2–3 mm long. Rhachis internodes linear, 3 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3 mm long, villous, with 2–3 mm long hairs.

**Sterile Spikelets.** Companion sterile spikelets represented by single glumes, linear or lanceolate, 4 mm long, shorter than fertile. Companion sterile spikelet glumes 3 -veined.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base truncate, attached transversely.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3–4 mm long, hyaline, 0 -veined, without midvein, without lateral veins, obtuse. Fertile lemma linear, hyaline, without keel, 2 -veined, 0–3 -veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 16 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 2, 0.5 mm long.

**Distribution (TDWG). Continent.** Africa, Temperate Asia, Tropical Asia.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India: *Wight KD 3372* (K holo, CAL).


**Derivation** (Clifford & Bostock 2007): L. broad and dwarf the growth having taken place horizontally. With spreading geniculate culms.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Annual. Culms rambling, slender, 30–60 cm long. Culm-nodes glabrous. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 2–2.8 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate or ovate, 5–9 cm long, 10–26 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliolate.

**Inflorescence.** Inflorescence composed of racemes. Peduncle 17 cm long, glabrous or pubescent above. Racemes 2–4, digitate, 2–5.6 cm long. Rhachis fragile at the nodes, pubescent on surface. Rhachis internodes filiform, 3.5–4.6 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 2.2–3.5 mm long, pubescent.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets lanceolate, subterete, 6.8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base truncate, attached transversely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, 7 -veined. Lower glume surface scabrous or spinose, rough above. Upper glume lanceolate, chartaceous, 1-keeled, keeled above, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 5.6 mm long, hyaline, 0 -veined, without midvein, without lateral veins, ciliolate on margins. Fertile lemma lanceolate, 4.8 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 9.5 mm long overall, with twisted column. Column of lemma awn 6 mm long, glabrous. Palea 2.5 mm long.

**Flower and Fruit.** Anthers 3, 3.4 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country/Province/State.** Indian Subcontinent. India. Tamilnadu.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 865).

Derivation (Clifford & Bostock 2007): L. spiny. Lower glume with abundant spicular hairs.


Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 20–60 cm long, rooting from lower nodes. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths 1–2.25 cm long, glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane. Leaf-blade base amplexicaul. Leaf-blades lanceolate or ovate, 1.5–3.5 cm long, 5–12 mm wide, flaccid. Leaf-blade surface glabrous or pubescent. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–5, single or paired or digitate, 2–4 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear, 3.5–3.75 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 0.6–0.75 mm long, villous.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas, lanceolate, 4–4.5 mm long, shorter than fertile. Companion sterile spikelet glumes keeled, scabrous. Companion sterile spikelet lemmas 2, enclosed by glumes, muticus.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5.5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.5–3 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma lanceolate, 4–5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 10–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 2 mm long. Caryopsis with adherent pericarp.

2n = 18 (1 ref TROPICOS).


**Derivation** (Clifford & Bostock 2007): *L. e-*, without; *pecten*, comb; *-atus*, possessing. Differs from a related species by the absence of teeth on the lower glume margins.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Sterile Spikelets.** Companion sterile spikelets well-developed, lanceolate, 4.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–5.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus attached transversely.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3.5 mm long, hyaline, 2 -veined, obtuse. Fertile lemma oblong, 4.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 10 mm long overall, with a straight or slightly twisted column or with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 2, 3.5 mm long, yellow. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.

**Country /Province /State.** Arabian Peninsula, China. China South Central, China North-Central.

**Indian Subcontinent.** Eastern Himalaya, Nepal.

Gansu, Shaanxi. Guizhou, Sichuan, Yunnan.


**TYPE from China.** T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: China, Guizhou: *Ningbo Exped. 691* (JSBI holo).

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.


**Sterile Spikelets.** Companion sterile spikelets well-developed, lanceolate, 4.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–5.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3.5 mm long, hyaline, 2 -veined, obtuse. Fertile lemma oblong, 4.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 10 mm long overall, with a straight or slightly twisted column or with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 3.5 mm long, yellow. Caryopsis with adherent pericarp.


Guizhou, Yunnan.


TYPE from Japan. Basionym or Replaced Name: Phalaris hispida Thunb. Fl. Jap. 44 (1784). T:<Type of Basionym> fide TROPICOS and Kew Synonomy Database: HT: Thunberg 1776, Japan (UPS IDC 1036)).


Derivation (Clifford & Bostock 2007);. L. bearing coarse stiff hairs. Plant wholly or partly rough to the touch.


Habit, Vegetative Morphology. Annual, mat forming. Culms rambling, slender, 15–50 cm long, 0.3–1 mm diam., rooting from lower nodes. Culm-internodes 1–6 cm long. Culm-nodes pubescent. Leaf-sheaths pilose, outer margin hairy. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blade base amplexicaul.
Leaf-blades ovate, 1–6 cm long, 8–25 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy on both sides. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acute.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–20, digitate, 2.5–5 cm long, 1–1.5 mm wide. Rhachis fragile at the nodes, glabrous on margins. Rhachis internodes filiform, 2–6 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 0.2–1 mm long, glabrous.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus attached transversely.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 0.66 length of spikelet, hyaline, 2 -veined, obtuse. Fertile lemma oblong, 2–6 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, muticous or awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 0–20 mm long overall, with a straight or slightly twisted column or with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 2, 0.5–1 mm long. Caryopsis with adherent pericarp, oblong, 3.5–5 mm long.

\[n = 18\] (1 ref TROPICOS).

**Distribution (TDWG), Continent.** Europe (*), Africa, Temperate Asia, Tropical Asia, Australasia, Pacific, North America, South America.

**Region.** Northern Europe (*), Eastern Europe.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Deccan: *Woodrow 189* (K holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. unarmed. Apices of lemmas or glumes rounded.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

amplexicaul. Leaf-blades lanceolate or ovate, 2–5 cm long, 4–12 mm wide, flaccid. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminated.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–6, digitate, 1.5–5 cm long. Rhachis fragile at the nodes, glabrous on margins. Rhachis internodes filiform, 2 mm long. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 2.5–3 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, attached transversely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, chartaceous, without keels. Upper glume lanceolate, chartaceous, 1-keeled, keeled above, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma lanceolate, 2.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 7–8 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp.

\[ n = 18 \] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India.

Maharashtra.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Concan: Stocks (W holo, L, CAL).

**Illustrations (Books):** G.G.Potgar, C.B.Salunkhe & S.R.Yadav, Grasses of Maharashtra (2012) (Fig.6).


**Derivation** (Clifford & Bostock 2007): L. *jubum*, mane; -ata, possessing. The inflorescence or awn resembles a fox tail.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Annual. Culms rambling, slender, 10–22 cm long. Culm-nodes pubescent. Leaf-sheaths pilose, with simple hairs or tubercle-based hairs. Ligule a ciliolate membrane, 0.4–0.7 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 1.4–3.9 cm long, 3–6 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins ciliate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–3, paired or digitate, 2 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform, 4–5.1 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 1.7–2.6 mm long, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, male, lanceolate, 3.9–5 mm long, shorter than fertile. Companion sterile spikelet glumes 4–7 -veined. Companion sterile spikelet lemmas 2, enclosed by glumes.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6–8.4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base truncate, attached transversely. Spikelet callus hairs 1–1.5 mm long.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, chartaceous, without keels, 2–4 -veined. Lower glume surface asperulous, rough on veins. Upper glume lanceolate, chartaceous, 1-keeled, keeled above, 3 -veined. Upper glume apex acute.
Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1.6–2.2 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma lanceolate, 2.2–3.9 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 75–150 mm long overall, with twisted column. Column of lemma awn 18–46 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 0.7–1.3 mm long. Caryopsis with adherent pericarp.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Junnar, Maharashta State, India.


Habit, Vegetative Morphology. Annual. Culms rambling, weak, 10–20 cm long, rooting from lower nodes. Culm-nodes pubescent. Leaf-sheaths 0.5–1.75 cm long, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.7 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate or ovate, 1–2.5 cm long, 5–7.5 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Peduncle 2–3 cm long, glabrous. Racemes 5–12, digitate, 1–1.75 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform, 1.25–1.8 mm long. Spikelets solitary. Fertile spikelets sessile. Pedicels present, filiform, 0.1–0.6 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 1.5–2 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous or pubescent, base truncate, attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma lanceolate, 1 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire or dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 4–5 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.3–0.5 mm long. Caryopsis with adherent pericarp, linear, 1.2 mm long.


Arthraxon lanceolatus (Roxb.) Hochst. Flora 39: 188. (1856).


S.R.Yadav, Grasses of Maharashtra (2012) (Fig. 8 as var. lanceolatus; Fig. 9 as var. echinatus; Fig. 10 as var. meeoldii, Fig. 12 as var. villosus).


Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, 2–5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear, 2.5–3 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 1–1.5 mm long, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 4–5 mm long, shorter than fertile. Companion sterile spikelet glumes keeled, 6–7 -veined. Companion sterile spikelet lemma 2, enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base truncate, attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2–3 mm long, hyaline, 2–3 -veined. Fertile lemma lanceolate, 4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 10–12 mm long overall, with twisted column. Column of lemma awn 5–6 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 1–2 mm long. Caryopsis with adherent pericarp. n = 15 (1 ref TROPICOS).


**Habit, Vegetative Morphology.** Annual, mat forming. Culms rambling, slender, 5–30 cm long. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades lanceolate or ovate, 1–4 cm long, 3–10 mm wide, flaccid.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–9, digitate, 1–2 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs lengthening towards internode tip, 1–2(–3) mm long. Rhachis internodes linear, 1 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 1–1.5 mm long, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed or represented by barren pedicels (rarely), lanceolate, 1–2(–3) mm long, shorter than fertile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, laterally compressed, 2–3(–5) mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base truncate, attached transversely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, chartaceous, without keels. Lower glume surface convex, asperulous. Upper glume lanceolate, chartaceous, 1-keeled, keeled above. Upper glume apex acute, awned, 1 -awned, awn 0.5–1.5 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, obtuse. Fertile lemma lanceolate, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 6–10 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 2, 0.3–0.6 mm long.

*n* = 9 (3 refs TROPICOS), or 18 (1 ref TROPICOS).

**Distribution (TDWG).** Continent Africa, Temperate Asia, Tropical Asia.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Maoping, Guangdong Province, China.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Annual. Culms 40–50 cm long. Culm-nodes bearded. Leaf-sheaths mostly shorter than adjacent culm internode, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1 mm long. Leaf-blade base cordate. Leaf-blades lanceolate or ovate, 3–5 cm long, 6–18 mm wide. Leaf-blade surface puberulous, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–5, digitate. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform, 0.5–0.8 length of fertile spikelet. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 1 mm long.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus attached transversely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 0.8 length of spikelet, chartaceous, much thinner above, much thinner on margins, purple, without keels, 5–7 -veined. Lower glume lateral veins obscure. Lower glume surface convex, asperulous, rough on veins. Lower glume apex acute. Upper glume lanceolate, 1 length of spikelet, membranous, 1-keeled, keeled above. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3 mm long, hyaline, 2 -veined, obtuse. Fertile lemma oblong, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 7–8 mm long overall, with a straight or slightly twisted column or with twisted column. Column of lemma awn glabrous. Palea lanceolate, 1 mm long.

**Flower and Fruit.** Anthers 2, 2.5 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Temperate Asia.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960) (& as *A. meebodii*).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Concan: Meebold 9132 (K holo).

Illustrations: None found.


Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, 3–4.5 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 2–2.5 mm long. Rhachis internodes filiform, 4 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3 mm long, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, shorter than fertile. Companion sterile spikelet glumes chartaceous, 7 mm long, keeled, 9 -veined. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 9.5–10 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base truncate, attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 4.5 mm long, hyaline, 0 -veined, without midvein, without lateral veins, obtuse. Fertile lemma lanceolate, 6 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 19–22 mm long overall, with twisted column. Column of lemma awn 7–8 mm long, glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 2.5 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Tropical Asia.


Illustrations (Books): H.J.Noltie, The Grasses of Bhutan (2000) (811, Fig. 59), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 869).

Derivation (Clifford & Bostock 2007): Gk. mikros, small; phyllon, leaf. Leaf-blades short.


Habit, Vegetative Morphology. Annual. Culms rambling, slender, 15–30 cm long. Culm-nodes pubescent. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.4–2.5 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate or ovate, 0.3–1.7 cm long, 1–4 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes. Peduncle 1.7–9 cm long, glabrous. Racemes 1–3, single or paired or digitate, 2.8–3.9 cm long. Rhachis fragile at the nodes, with scattered hairs or pubescent on surface. Rhachis internodes filiform, 1.2–2.4 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 1.6–1.9 mm long, ciliate.

Spikelets. Companion sterile spikelets represented by single glumes, linear, 1.9–2.2 mm long, shorter than fertile. Companion sterile spikelet glumes 6 -veined, scaberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 2.8–3.9 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base truncate, attached transversely. Spikelet callus hairs 0.2–0.5 mm long.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1.6–2.1 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma lanceolate, 1.7–2.1 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 7–11 mm long overall, with twisted column. Column of lemma awn 3.5–4.5 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.6 mm long. Caryopsis with adherent pericarp.

n = 8 (1 ref TROPICOS).


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 868).
Derivation (Clifford & Bostock 2007): L. *multus*, many; *nervus*, nerve. Leaf-blades many-nerved.


Inflorescence. Inflorescence composed of racemes. Racemes 2–4, digitate. Rachis fragile at the nodes, ciliate on margins. Rachis internodes filiform, 0.75 length of fertile spikelet. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 0.4 mm long.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4–4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, obtuse. Fertile lemma oblong, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 1.5–4 mm long overall, with a straight or slightly twisted column or with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.8 mm long. Caryopsis with adherent pericarp, oblong.


**Arthraxon nudus** (Steud.) Hochst. *Flora* 39: 188 (1856).


Illustrations: None found.


Inflorescence. Inflorescence composed of racemes. Racemes 4–9, borne along a central axis, 1–2.5 cm long. Central inflorescence axis 4–6 cm long. Rachis fragile at the nodes, glabrous on surface, glabrous on margins. Rachis internodes linear, 3 mm long, 1 length of fertile spikelet. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 1 mm long, glabrous.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, attached transversely.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2 mm long, 0.66 length of spikelet, hyaline, 2 -veined, obtuse. Fertile lemma lanceolate, 2.2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 7 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.5 mm long, yellow. Caryopsis with adherent pericarp.


Illustrations: None found.


Inflorescence. Inflorescence composed of racemes, exserted or embraced at base by subtending leaf. Racemes 5–8, digitate, 5–7 cm long. Rhachis fragile at the nodes, pilose on surface, ciliate on margins. Rhachis internodes filiform, 3.5–4 mm long. Spikelets in pairs. Fertile spikelets sessile and pedicelled, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 1.5–2 mm long, ciliate.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4.5–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3 mm long, hyaline, 2 -veined, obtuse. Fertile lemma lanceolate, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 10–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 1.5–2 mm long. Caryopsis with adherent pericarp.


Country /Province /State. Eastern Asia. Taiwan.


**Derivation** (Clifford & Bostock 2007): Gk. *prion*, saw; *-odes*, resembling. Lower glume has stiff hairs on the marginal and submarginal nerves.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Andropogoninae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 2–8, digitate, 4–7 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis hairs 1–2 mm long. Rhachis internodes linear, 3–6 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3–6 mm long, ciliate.

**Sterile Spikelets.** Companion sterile spikelets well-developed, lanceolate, 4–5 mm long, shorter than fertile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear to lanceolate, laterally compressed, 5–6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base truncate, attached transversely.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, obtuse. Fertile lemma lanceolate, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 8–15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 2.5–3.5 mm long.

n = 8 (1 ref TROPICOS), or 10, or 18.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Arabia. T:*fide* TROPICOS and Kew Synonomy Database: Arabia, Jabel Qara: *Vesey-FitzGerald 12364/7* (BM holo, K).
Illustrations: None found.


Inflorescence. Inflorescence composed of racemes. Racemes 2–9, digitate, 0.5–2 cm long. Rachis fragile at the nodes. Rachis internodes filiform to linear. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, reduced to a stomp.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 0.8–1.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base truncate, attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma oblong, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 5–6 mm long overall, with twisted column. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.2 mm long.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Mukat Behari Raizada (1907-) Indian botanist.


Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, 10–50 cm long, rooting from lower nodes. Lateral branches sparse. Leaf-sheaths 1–2 cm long, striately veined, glabrous on surface or pilose, outer margin hairy. Ligule a ciliolate membrane, 1.5 mm long. Leaf-blade base cordate. Leaf-blades lanceolate or ovate, 2–7 cm long, 4–20 mm wide. Leaf-blade surface pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle 6–12 cm long. Racemes 1–2, single or paired, 2–5 cm long. Rachis fragile at the nodes, ciliate on margins. Rachis internodes linear, 3.5–4.5 mm long. Rachis internode tip not enlarged. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 2.5 mm long, ciliate, hairy all along but hairs longer above.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 5 mm long, shorter than fertile. Companion sterile spikelet glumes chartaceous, 4–5 mm long, keeled, 6–7 -veined. Companion sterile spikelet lemmas 2, enclosed by glumes, 3.5–4 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 6–7 mm long, 1–1.3 mm wide, falling entire, deciduous with accessory branch structures. Spikelet callus square, 0.5 mm long, pubescent, base truncate, attached transversely.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obleng, 3–4 mm long, hyaline, obtuse. Fertile lemma lanceolate, 5 mm long, hyaline, without keel. Lemma apex acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 15–17.5 mm long overall, with twisted column. Palea absent or minute.

**Flower and Fruit.** Anthers 3, 2–3 mm long. Caryopsis with adherent pericarp, linear, isodiametric, dark brown.

**Distribution (TDWG). Continent.** Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India.

**Arthraxon santapaui** Bor. Kew Bull. 1951, 446 (1952).

**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

**TYPE from India.** T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Purandhar Fort: Santapau 11450a (K holo).

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Andropogoninae.

**Habit, Vegetative Morphology.** Annual. Culms rambling, 15–30 cm long. Culm-nodes pubescent. Leaf-sheaths antrorsely scabrous, glabrous on surface or pilose, with tubercle-based hairs. Ligule a fringe of hairs. Leaf-blade base amplexicaul. Leaf-blades lanceolate, 2–4 cm long, 5–10 mm wide, flaccid. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acute.

**Inflorescence.** Inflorescence composed of racemes. Peduncle pubescent above. Racemes 2–3, paired or digitate, 3 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform, 3.5 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3 mm long, ciliate.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. spikelets two-flowered - the lower floret male or barren, the upper fertile. spikelets lanceolate, laterally compressed, 7.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base truncate, attached transversely.

**Glumes.** Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, chartaceous, without keels, 7 -veined. Lower glume surface scabrous or spinose, rough above. Upper glume lanceolate, chartaceous, 1-keeled, keeled above, 3 -veined. Upper glume surface scabrous, pilose, hairy above. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obleng, 3 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma lanceolate, 3 mm long, hyaline, without keel, 1 -veined, 0-3 -veined, one-veined. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 18 mm long overall, with twisted column. Column of lemma awn 8 mm long, glabrous. Palea absent or minute.

**Flower and Fruit.** Anthers 2, 0.8 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India.

**Arthraxon submuticus** (Nees ex Steud.) Hochst. *Flora* 39: 188 (1856).


Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. sub*, almost; *mutica*, blunt. Apices of glumes or lemmas rounded.


Habit, Vegetative Morphology. Annual, mat forming. Culms rambling, 15–100 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface or hispid. Ligule an eciliate membrane. Leaf-blade base cordate. Leaf-blades lanceolate or ovate, 1.5–4 cm long, 4–15 mm wide. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, digitate, 1–3 cm long. Rhachis fragile at the nodes, angular, glabrous on margins. Rhachis internodes filiform. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 0.5–1 mm long, glabrous.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 3 mm long, falling entire, deciduous with accessory branch structures. Spikelets callus glabrous, base obtuse, attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, obtuse. Fertile lemma ovate, hyaline, without keel, 0 -veined, 0–3 -veined, without veins. Lemma apex acute, muticous. Palea absent or minute.

Flower and Fruit. Anthers 3, 1.5 mm long.


Habit, Vegetative Morphology. Annual. Culms decumbent, 50–100 cm long, rooting from lower nodes. Culm-nodes glabrous or bearded. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane. Leaf-blade base amplexicaul. Leaf-blades lanceolate or ovate, 2–5 cm long, 10–12 mm wide. Leaf-blade apex acuminated.


Sterile Spikelets. Companion sterile spikelets represented by barren pedicels.
Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, laterally compressed, 4.5–5.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3–3.5 mm long, hyaline. Fertile lemma lanceolate, 4.25–5.25 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 6–8 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2 or 3, 3 mm long. Caryopsis with adherent pericarp.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. villi, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.


Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, 1–4 cm long. Rhachis fragile at the nodes, villous on margins. Rhachis internodes linear, 3 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2 mm long, villous.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas, lanceolate, 4 mm long, shorter than fertile. Companion sterile spikelet glumes keeled, 7 -veined, scabrous. Companion sterile spikelet lemmas 2, enclosed by glumes, muticus.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base truncate, attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2–2.5 mm long, hyaline. Fertile lemma lanceolate, 3–3.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 12–15 mm long overall, with twisted column. Column of lemma awn 5–6 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Xinan, Sichuan Province, China.


Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 4 mm long. Companion sterile spikelet glumes 5–7 -veined. Companion sterile spikelet lemmas muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachillla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–5.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus attached transversely.


Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3 mm long, hyaline, 2 -veined, obtuse. Fertile lemma oblong, 4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 10–12 mm long overall, with a straight or slightly twisted column or with twisted column. Column of lemma awn glabrous. Palea lanceolate.

Flower and Fruit. Anthers 2, 3.5 mm long, yellow. Caryopsis with adherent pericarp.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. filum, thread; folium, leaf. Leaf-blades very narrow.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths thickened and forming a bulb. Culms slender, 30–60 cm long, 1–1.2 mm diam. Culm-nodes glabrous. Ligule an eciliate membrane, 1 mm long. Leaf-blades filiform, involute, 10–45 cm long, 1 mm wide. Leaf-blade surface ribbed, glabrous or pilose. Leaf-blade apex acute, smooth or hairy.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 6–8 mm long, 1.2–2 mm wide, falling entire. Spikelet callus pubescent. Spikelet callus hairs 0.03 length of spikelet.

**Glumes.** Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume linear, 3–6 mm long, 0.5–0.75 length of spikelet, coriaceous, much thinner on margins, without keels, 3 -veined. Lower glume apex awned, 1 -awned, awn 3–4 mm long. Upper glume oblong, 1 length of spikelet, coriaceous, without keels, 5 -veined. Upper glume awned, 1 -awned, awn 1.2 mm long.

**Florets.** Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, coriaceous, 5 -veined, scabrous, rough above, obtuse. Fertile lemma linear, 6 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma apex obtuse. Palea 0.5 length of lemma, hyaline, without keels.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 3–4 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Brazil. Brazil West Central.


**Accepted by:** W.D Clayton & K.Harman, GrassBase (2008) and online.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk *pipto*, fall down; *stachys*, spike as of an ear of wheat. Spikelets deciduous.


**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths thickened and forming a bulb. Culms 30–75 cm long. Culm-nodes glabrous. Leaves mostly basal. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades linear or lanceolate, 10–30 cm long, 2–6 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 7–10 cm long, 4–7 cm wide, contracted about primary branches. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6–7 mm long, falling entire. Spikelet callus linear, 2 mm long, pilose. Spikelet callus hairs 0.33 length of spikelet.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, coriaceous, 5–7 -veined, scabrous, rough above, obtuse. Fertile lemma linear, membranous, without keel, 3 -veined, 0–3 -veined. Lemma apex obtuse. Palea hyaline, without keels.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 2. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Caribbean. Cuba, Jamaica.


**TYPE** from Colombia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Colombia: Vaupés: Municipio de Mit? sector Yapobod? sabanas y herbazales de sustratos cuaraticos y afloramientos rocosos graníticos precámaricos (lajas), ca. 1°2’N - 70°4’O, ca. 480 m, mayo de 2010, D. Giraldo-Cañas 4560 HT: COL; IT: COAH, COL.

**Illustrations:** None found.
**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.


**Inflorescence.** Inflorescence a panicle. Peduncle 7–13 cm long. Panicle open, lanceolate, 5–8 cm long, 1.6–2.1 cm wide. Panicle branches capillary, flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, unequal, 2–22 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, laterally compressed, 4.5–5.5 mm long. Fertile spikelet callus pubescent or pilose. Spikelet callus hairs 0.8–1.3(–2.8) mm long.

**Glumes.** Glumes dissimilar, shorter than spikelet, firmer than fertile lemma. Lower glume linear or lanceolate, 1–3 mm long. Lower glume apex awned, 1 -awned, awn (4–)4.5–5.8(–6.8) mm long. Upper glume linear or lanceolate, 5 mm long, 1 length of spikelet, coriaceous, with scarios margins, without keels, 3 -veined. Upper glume primary vein conspicuous. Upper glume surface scabrous, rough on veins. Upper glume awned, 1 -awned, awn (2–)2.6–6 mm long.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 4.5–5.5 mm long, 1 length of spikelet, membranous, 3 -veined, scabrous, rough on veins, erose, acute. Palea of lower sterile floret hyaline, 2.8–3 mm long. Fertile lemma lanceolate, 4.5–4.8 mm long, 1.1 mm wide, scarios, without keel, 3 -veined, 0–3 -veined. Palea lanceolate, 3.9–4.1 mm long, 0.9 length of lemma, hyaline, 3 -veined, without keels.

**Flower and Fruit.** Lodicules 2, 0.2 mm long, fleshy. Anthers 3, 2.5–2.7 mm long, brown.

**Distribution (TDWG).** Continent. South America. Country /Province /State. Western South America. Colombia.


**TYPE from Brazil.** T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: K.F.P. von Martius s.n., no date, Brazil: in campis altis Chapada de Paranae provinciae Minarum versus Goyaz, et ad Rio Fermozo (M; IT: US-865393 (fragm. ex M)).

**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (241, Fig. 90), R.Pilger, *Die Naturlichen Pflanzenfamilien* 14e (1940) (107, Fig. 63).

**Derivation (Clifford & Bostock 2007):** *L. villi*, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths thickened and forming a bulb. Culms geniculately ascending or decumbent, 50–100 cm long. Ligule a fringe of hairs, 1 mm long. Leaf-blades 10–28 cm long, 5–10 mm wide.

**Inflorescence.** Inflorescence a panicle. Peduncle open, ovate, 6–12 cm long. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present, filiform, 2–12 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 4–6 mm long, falling entire. Spikelet callus bearded. Spikelet callus hairs 0.3–0.6 length of spikelet.

**Glumes.** Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume linear or lanceolate, 3–7 mm long. Upper glume ovate, 1 length of spikelet, coriaceous, without keels, 3 -veined. Upper glume apex entire or dentate, 2 -fid, awned, 1 -awned, awn 2–4 mm long.

**Florets.** Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, coriaceous, 3 -veined, scabrous, rough above, obtuse. Fertile lemma linear, 3–5
mm long, membranous, without keel, 1 -veined, 0–3 -veined. Lemma apex obtuse. Palea separating from lemma above, 0.66 length of lemma, hyaline, 0 -veined, without keels.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, 4 mm long. Embryo 0.5 length of caryopsis.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Brazil. Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast.


**Arthropogon xerachne** Ekman. *Ark. Bot.* 10(17): 9, t. 1, f. 4, t. 6, f. 4. 1911.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Arthropogoninae.


**Inflorescence.** Inflorescence a panicle. Panicle contracted, oblong, 6–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 17–33 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 7–9 mm long, 2–3 mm wide, falling entire. Spikelet callus bearded. Spikelet callus hairs 0.5–0.66 length of spikelet.

**Glumes.** Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume linear, 10–13 mm long, 0.5–0.75 length of spikelet, coriaceous, without keels, 3 -veined. Lower glume apex awned, 1 -awned, awn 8 mm long. Upper glume oblong, 1 length of spikelet, coriaceous, without keels, 3 -veined. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 7–8 mm long.

**Florets.** Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, coriaceous, 3 -veined, dentate, 2 -fid, obtuse, awned. Awn of lower sterile floret 3–4 mm long. Fertile lemma linear, membranous, without keel, 1 -veined, 0–3 -veined. Lemma apex obtuse. Palea absent or minute.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast.

São Paulo Parana. Sao Paulo, Paraná.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *angustus*, narrow; *folium*, leaf. Leaf-blades narrow.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes borne along a central axis, straight, bilateral, 4–6 cm long, bearing 3 fertile spikelets on each. Central inflorescence axis 20–30 cm long. Spikelet packing lax. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 4–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 22–30 mm long, 2–2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2.5–3 mm long.


Florets. Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate or ovate, 5–7 mm long, chartaceous, without keel, 9-veined, more than 3-veined. Lemma apex acute, mucronate. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


Distribution (TDWG). Continent. South America.


Illustrations (Journals): *Novon* (8: 411 Fig.1 (1998)).

Derivation (Clifford & Bostock 2007): L. auris, ear; -ula, diminutive; -ata, possessing. Leaf-blades rounded at the base or with auricles.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, pendulous at the tip, 200–400 cm long, 2–3 mm diam., woody. Culm-internodes terete, thick-walled, 30–49 cm long, yellow or light green, distally glabrous. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement several, in a clump, subtended by a bare patch above the node, with 1 branch dominant, thinner than stem. Culm-sheaths present, persistent, 4–8 cm long, pubescent, hairy on margins. Leaves 4–6 per branch. Leaf-sheaths pubescent. Leaf-sheath oral hairs setose, 5–8 mm long, dark. Leaf-sheath auricles erect, 1–2.5 mm long. Ligule a ciliolate membrane, 0.5 mm long, pubescent on abaxial surface. Collar with external ligule. Leaf-blade base with a brief petiolo-like connection to sheath, petiolo 0.3–0.5 cm long, petiolo glabrous. Leaf-blades lanceolate, 5–16 cm long, 12–25 mm wide. Leaf-blade venation with 14–15 secondary veins. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight, bilateral, 15–30 cm long, bearing 17–19 fertile spikelets on each. Rhachis glabrous on surface or puberulous on surface. Spikelet packing broadside to rhachis, distant. Rhachis internodes 3–20 mm long. Spikelets appressed, solitary, Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the
upper sterile. Spikelets linear, laterally compressed, 13–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes flattened, 3–5 mm long.

**Glumes.** Glumes several, 3 empty glumes, persistent, similar, shorter than spikelet. Lower glume elliptic, 4.5–6 mm long, chartaceous, without keels. Lower glume surface puberulous. Lower glume margins ciliate. Lower glume apex acute. Upper glume elliptic, 4.5–6 mm long, without keels. Upper glume surface puberulous. Upper glume margins ciliate. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 6–7.5 mm long, 2–2.5 mm wide, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface rugulose, without grooves, puberulous. Lemma margins ciliate. Lemma apex acute, mucronate. Palea 6–6.5 mm long. Apical sterile florets 1 in number, rudimentary.

**Flower and Fruit.** Lodicules 3. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, 5.5 mm long. Embryo 0.15 length of caryopsis. Hilum linear, 1 length of caryopsis.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia.


**TYPE** from Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Siera de Banao: Lune ex Leon 20441 (HAC holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Sierra de Banao, Cuba.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, straight, bilateral, 5–10 cm long, bearing few fertile spikelets, bearing 4–7 fertile spikelets on each. Spikelet packing broadside to rhachis, distant. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 10 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 4–6 mm long, chartaceous, without keels. Lower glume apex acuminate. Upper glume lanceolate, 4–6 mm long, without keels. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate, 6–7 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma apex acute. Apical sterile florets 1 in number, rudimentary.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean. Cuba.


**TYPE** from Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Amazonas: Laja Suiza, first granite outcrop upstream from mouth of black-water Río Guasacavi on north (right) side, 3.5 km SSW of Santa Cruz (direct air distance), depression next to seasonally flooded shrub savannam 3°4’18N, 67°4’30”W (GPS), 100 m, 3 Mar 1996, *P.E. Berry, G.A. Romero & L. Brako 5866* (HT: VEN; IT: MO (sheets), TFAV, UWSP).
**Illustrations:** None found.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose, clumped moderately or densely. Rhizomes short, pachymorph. Butt sheaths absent. Culms slender, 600 cm long, 4–5 mm diam., woody. Culm-internodes terete, thin-walled, 100 cm long. Lateral branches dendroid. Branch complement many, in a clump, subtended by a bare patch above the node. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.5–1 mm long, brown. Collar with external ligule. Leaf-blade base truncate or broadly rounded, symmetrical or asymmetrical, with a brief petiole-like connection to sheath, petiole 0.15–0.5 cm long. Leaf-blades reflexed, lanceolate, 11–16 cm long, 10–16 mm wide. Leaf-blade surface scaberulous, rough adaxially, puberulous, hairy abaxially. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Peduncle 4–10 cm long. Racemes 1, single, bilateral, 15–30 cm long, bearing 12–20 fertile spikelets on each. Rhachis puberulous on surface, scabrous on margins. Spikelet packing broadside to rhachis, distant. Spikelets solitary. Fertile spikelets sessile or sessile and pedicelled. Pedicels absent or present, 1–2 mm long.

**Fertile Spikelets.** Spikelets comprising 9–15 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 40–80(–100) mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes 2–3 mm long.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma or similar to fertile lemma in texture. Lower glume lanceolate, 4–6 mm long, 0.66–0.75 length of upper glume, membranous, 1-keeled, keeled above, 3–5 -veined. Lower glume apex acute. Upper glume lanceolate, 6–8 mm long, 0.66 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 7–9 -veined. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 9–11.5 mm long, 1.3–2 mm wide, membranous or coriaceous, keeled, (9–)11–13(–15) -veined, more than 3-veined. Lemma apex acute. Palea 8–11 mm long, 1–1.1 length of lemma, 4 -veined. Apical sterile florets resembling fertile though underdeveloped.


**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (34, Fig. 3).

**Derivation** (Clifford & Bostock 2007): L. *canalis*, channel; -ula, diminutive; -ata, possessing. Leaf-blades deeply channelled.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms slender, 600 cm long, 4–5 mm diam., woody. Culm-internodes terete, thin-walled, 100 cm long. Lateral branches dendroid. Branch complement many, in a clump, subtended by a bare patch above the node. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 5.5–9 cm long, 12–20 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate or attenuate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, straight, bilateral, 8–12 cm long. Spikelet packing broadside to rhachis, lax, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper...
sterile. Spikelets linear, subterete, 15–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2 mm long.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 5 mm long, 0.7–0.8 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume surface pubescent. Lower glume apex acute. Upper glume lanceolate, 6–7 mm long, 0.5 length of adjacent fertile lemma, chartaceous, without keels, 7 -veined. Upper glume surface pubescent. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 11–12 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acute. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.
Country /Province /State. Western South America. Bolivia.


**Illustrations (Journals):** *Novon* (8: 413 Fig.2 (1998)).

**Derivation** (Clifford & Bostock 2007): *L. ense*, denoting origin. From Sierra de Chiribiqueta, Colombia.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 300–500 cm long, 3–6 mm diam., woody. Culm-internodes terete, thin-walled (pith filled), 28–52 cm long, distally hispid, with reflexed hairs. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement several, in a clump, subtended by a bare patch above the node, with 1 branch dominant, thinner than stem. Culm-sheaths present, persistent, 3.5–5 cm long, 3 times as long as wide, glabrous or puberulous, ciliate on shoulders, shoulders with curved hairs, shoulders with 2 mm long hairs. Culm-sheath ligule 0.2 mm high. Culm-sheath blade ovate, demarcated but persistent, erect, 1–4 cm long, 9–20 mm wide, glabrous on surface and with ciliate margins. Leaves 9–14 per branch. Leaf-sheaths 2.5–4 cm long, mostly shorter than adjacent culm internode or subequal to internodes, striately veined, glabrous on surface. Leaf-sheath oral hairs setose, curly, 5–10 mm long, dark. Ligule a ciliolate membrane, 0.8–1 mm long, pubescent on abaxial surface. Collar with external ligule. Leaf-blade base truncate, with a brief petiole-like connection to sheath, petiole 0.2–0.5 cm long. Leaf-blades ovate, 6–18.5 cm long, 20–50 mm wide. Leaf-blade midrib indistinct. Leaf-blade venation with distinct cross veins. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, straight, bilateral, 8–17 cm long, bearing 10–18 fertile spikelets on each. Rhachis glabrous on surface or pilose on surface. Spikelet packing broadside to rhachis, lax. Rhachis internodes 5–10 mm long. Spikelets spreading, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 5–17 mm long, 0.6–0.8 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 6.5–7 mm long.

**Glumes.** Glumes two or several, comprising 0–2 gemmiferous bracts, 1–2 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, 3–4 mm long, chartaceous, without keels, 5–7 -veined. Lower glume lateral veins prominent. Lower glume surface pubescent. Lower glume margins ciliolate. Lower glume apex acute. Upper glume ovate, 4.3–5.5 mm long, without keels, 5–7 -veined. Upper glume primary vein conspicuous. Upper glume surface pubescent. Upper glume margins ciliolate. Upper glume apex acute.

**Florets.** Fertile lemma oblong, 5.5–8.5 mm long, 2–2.5 mm wide, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface rugulose, without grooves, pubescent. Lemma margins
ciliate, hairy above. Lemma apex acute, mucronate. Palea 6.5–8.1 mm long. Palea apex ciliate. Apical sterile florets 1 in number, rudimentary.

**Flower and Fruit.** Lodicules 3, 1.5 mm long, veined, ciliate. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.
Country /Province /State. Western South America. Colombia.


**Illustrations (Books):** E.J.Judziewicz et al, *American Bamboos* (1999) (156, Fig. 68).

**Illustrations (Journals):** *Smithsonian Contributions to Botany* (9: 18, Fig. 6 (1973)).

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Cuba.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, straight, bilateral, 7–20 cm long. Spikelet packing distant. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 1.5–3 mm long, chartaceous, without keels. Lower glume apex acuminate. Upper glume lanceolate, 3–4 mm long, chartaceous, without keels. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate, 6 mm long, chartaceous, acuminate. Fertile lemma lanceolate, 7 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 1 mm long overall. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.
Country /Province /State. Caribbean, Western South America. Cuba.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, slender, woody. Culm-internodes terete, thick-walled, smooth,
distally pubescent. Culm-nodes pubescent. Lateral branches dendroid. Branch complement one to three, in a clump, subtended by a bare patch above the node, with subequal branches. Culm-sheaths present. Leaves distichous. Leaf-sheaths 1 cm long, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, 5–15 mm long. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 1.5–3 cm long, 4–6 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, straight, bilateral, 10–20 cm long, bearing 8–15 fertile spikelets on each. Rhachis glabrous on surface. Spikelet packing distant. Spikelets deflexed, clustered at each node. Fertile spikelets sessile. Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acute. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate or ovate, 10 mm long, chartaceous, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma margins ciliolate, hairy above. Lemma apex obtuse, mucronate. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped. Flower and Fruit. Lodicules 3. Anthers 3. Stigmas 2. Ovary umbonate. Caryopsis with adherent pericarp.


**Illustrations (Journals):** *Systematic Botany* (18: 83, Fig.1 (1993)).

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Ecuador.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

 Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 300–600 cm long, 1–2.5 mm diam., woody. Culm-internodes terete, solid, purple, retrorsely scabrous, distally glabrous. Lateral branches dendroid. Bud complement 1. Branch complement three or several, in a clump, subtended by a bare patch above the node, with 1 branch dominant, thinner than stem. Culm-sheaths present. Leaves 3–7 per branch. Leaf-sheaths striately veined, puberulous. Leaf-sheath oral hairs setose, curly, 3–6 mm long, dark. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.25 cm long, petiole glabrous or pubescent. Leaf-blades lanceolate, 3.8–10 cm long, 8–13 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous (below). Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, flexuous or sinuous, bilateral, 5–9 cm long, bearing 3–6 fertile spikelets on each. Rhachis semiterete. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile. Fertile Spikelets. Spikelets comprising 5–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 25–40 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes eventually visible between lemmas.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 3–4.5 mm long, 0.75–9 length of upper glume, chartaceous, without keels, 1–3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent or obscure. Lower glume surface glabrous or puberulous. Lower glume apex acute. Upper glume ovate, 3.5–6 mm long, 0.5 length of adjacent fertile lemma, without keels, 3–5 -veined. Upper glume primary vein scabrous. Upper glume surface glabrous or puberulous. Upper glume apex acute.
**Florets.** Fertile lemma lanceolate, 6–13 mm long, chartaceous, red or purple, without keel, 7–9 -veined, more than 3-veined. Lemma surface glabrous or puberulous. Lemma apex acute, mucronate. Palea 1 length of lemma. Palea keels ciliolate. Palea surface pubescent, hairy on back. Palea apex emarginate to obtuse. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, lanceolate, 2.7–3 mm long, veined. Anthers 3, linear, 4.5–6 mm long, purple. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America. Country /Province /State. Northern South America, Western South America. Colombia, Ecuador.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, slender, drooping at the tip, 2 mm diam., woody. Culm-internodes terete, thick-walled, 25 cm long, retrorsely scabrous, distally glabrous. Lateral branches fastigiate. Branch complement many, in a clump, subtended by a bare patch above the node, with subequal branches. Culm-sheaths present. Leaf-sheaths striately veined, glabrous on surface. Leaf-sheath oral hairs setose, 5–7 mm long. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1 cm long. Leaf-blades deciduous at the ligule, lanceolate, 3–6 cm long, 4–8 mm wide. Leaf-blade surface glabrous. Leaf-blade apex hairy.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, straight, bilateral, 0–5 cm long, bearing 1–3 fertile spikelets on each. Spikelet packing lax. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 30–50 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes zig-zag, eventually visible between lemmas, glabrous.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 3–7 mm long, chartaceous, without keels. Lower glume apex acute. Upper glume lanceolate, 4–8 mm long. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, 5–9 mm long. Fertile lemma lanceolate or ovate, widest at 0.33 of its length from base, 9–12 mm long, 1.5 mm wide, chartaceous, light brown, without keel, more than 3-veined. Lemma apex obtuse, mucronate. Palea bowed outwards, 1 length of lemma. Palea surface puberulous, hairy on back. Apical sterile florets resembling fertile though underdeveloped.


TYPE from Dominica. T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: Dominica: *Imray (US syn); Trinidad: *Crueger (K syn); Trinidad, Las Cuevas hills: *Tocuche.

Illustrations: None found.


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms leaning, 100–500 cm long, 2–3 mm diam., woody. Culm-internodes terete, distally glabrous. Lateral branches dendroid. Branch complement two to several, in a clump, subtended by a bare patch above the node, with 1 branch dominant, thinner than stem. Culm-sheaths present. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs setose, 9–17 mm long. Ligule a ciliate membrane, 0.1–0.2 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 10–16 cm long, 14–38 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, sinuous (distally), bilateral, 9–16 cm long. Spikets packing broadside to rhachis, distant. Spikets appressed or ascending, solitary. Fertile spikets sessile.

Fertile Spikets. Spikets comprising 5–11 fertile florets, with diminished florets at the apex. Spikets of 2 or more fertile florets. Spikets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikets linear, laterally compressed, 25–34 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3–4 mm long, eventually visible between lemmas, glabrous.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume elliptic, 4.5–6 mm long, 0.8–0.9 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume apex acute. Upper glume elliptic, 5.3–6.9 mm long, 0.66–0.75 length of adjacent fertile lemma, without keels, 7 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 8–9.5 mm long, chartaceous, without keel, 9–11 -veined, more than 3-veined. Lemma surface glabrous or puberulous. Lemma apex obtuse. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


Chiapas.


T:<Type of Basionym>: *fide TROPICOS and Kew Synonomy Database: [French Guiana]: Plum. Mss. 5. t. 92. cited.,

Illustrations: None found.


Derivation (Clifford & Bostock 2007): L. solid with centre softer than outside. Culms solid except in the very centre.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, straight, bilateral, 0–7 cm long, bearing 1–4 fertile spikelets on each. Spikelet packing distant. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 3 mm long, chartaceous, without keels. Lower glume apex acuminated. Upper glume lanceolate, 4 mm long. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate or ovate, 5 mm long, chartaceous, 7–9 -veined, more than 3-veined. Lemma apex acute, mucronated. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent: South America.

**Country/Province/State.** Caribbean, Northern South America. Bahamas, Cuba, Dominican Republic, Haiti, Leeward Is, Puerto Rico, French Guiana.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, straight, bilateral, 15–30 cm long. Spikelet packing lax. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret.


**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate or ovate, 4–5 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acute, awned. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent: South America.

**Country/Province/State.** Caribbean. Cuba.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *fimbriae*, fringe; *nodum*, knot. Nodes bearing a skirt of reflexed hairs.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, pendulous at the tip, 700 cm long, 4–12 mm diam., woody. Culm-internodes terete, thick-walled, smooth or scaberulous. Culm-nodes bearded. Lateral branches dendroid, extravaginal. Bud complement 1. Branch complement several, in a clump, subtended by a bare patch above the node, with 1 branch dominant, thinner than stem. Culm-sheaths present, 9–13 cm long, setose on shoulders, shoulders with 10 mm long hairs. Culm-sheath blade linear, deciduous, erect, 6–7 cm long. Leaves 9–21 per branch. Leaf-sheaths keeled, glabrous on surface or puberulous, outer margin hairy. Leaf-sheath oral hairs setose, 3–6 mm long, dark. Ligule a ciliolate membrane, 0.2–0.3 mm long. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.07–0.1 cm long. Leaf-blades lanceolate, 2.5–11 cm long, 3–18 mm wide. Leaf-blade midrib indistinct. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight, bilateral, 2.5–3.5 cm long, bearing few fertile spikelets, bearing 2–5 fertile spikelets on each. Rhachis glabrous on surface. Spikelet packing broadside to rhachis, lax. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2–3 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 3–3.3 mm long, chartaceous, without keels, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acuminate. Upper glume lanceolate, 4.2–4.8 mm long, 1-keeled, keeled above, 5–7 -veined. Upper glume apex acuminate, mucronate.

Florets. Fertile lemma lanceolate, 5.3–6.5 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma apex acute, mucronate. Palea 1 length of lemma. Palea surface puberulous, hairy on back. Apical sterile florets 1 in number, rudimentary.


Illustrations (Journals): Systematic Botany (18: 86, Fig.3 (1993)).

Derivation (Clifford & Bostock 2007): L. *grandis*, large; *folium*, leaf. Leaf-blades large.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

in a clump, subtended by a bare patch above the node, with 1 branch dominant, thinner than stem. Culm-sheaths present. Leaves 7 per branch. Leaf-sheaths 7–8 cm long, mostly shorter than adjacent culm internode, striatly veined, papillose, glabrous on surface. Leaf-sheath oral hairs lacking. Leaf-sheath auricles erect, 5 mm long. Ligule a ciliolate membrane, 6–10 mm long, brown. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 1 cm long, petiole glabrous. Leaf-blades ovate, 20–26 cm long, 50–70 mm wide. Leaf-blade surface papillose, rough adaxially, glabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, straight or arcuate, bilateral, 25–40 cm long, bearing 15–25 fertile spikelets on each. Rhachis glabrous on surface. Spikelet packing broadside to rhachis. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 4–5 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 17–23 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1–1.5 mm long.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 5.5–7 mm long, chartaceous, 1-keeled, keeled above, 3 -veined. Lower glume lateral veins without connecting veins or with cross-veins. Lower glume apex acuminate. Upper glume lanceolate, 7–8.5 mm long, 1-keeled, keeled above, 5 -veined. Upper glume lateral veins without cross-veins or with cross-veins. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 10–11.5 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma lateral veins without cross-veins or with cross-veins. Lemma apex acute.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Haiti.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, straight, bilateral, 5 cm long, bearing 4–8 fertile spikelets on each. Spikelet packing distant. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes clavate, 3 mm long.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 6–6.5 mm long, chartaceous, without keels, 7 -veined. Lower glume apex obtuse. Upper glume lanceolate, 6–6.5 mm long, 7 -veined. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate or ovate, 7–8 mm long, chartaceous, without keel, 7 -
veined, more than 3-veined. Lemma apex acute, mucronate. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 200–400 cm long, 1–2 mm diam., woody. Culm-internodes terete, thick-walled. Culm-nodes glabrous. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement one, solitary. Culm-sheaths present, deciduous, pubescent, hairy at the base, without auricles, setose on shoulders, shoulders with 4–9.5 mm long hairs. Culm-sheath blade lanceolate, constricted at base, deciduous, reflexed, 2–2.5 cm long, 3–4 mm wide. Leaves 1–6 per branch. Leaf-sheaths keeled, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, 4–9.5 mm long. Ligule an eciliate membrane, 0.3–1.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.16–0.3 cm long, petiole glabrous. Leaf-blades lanceolate, 6–13 cm long, 10–20 mm wide. Leaf-blade midrib indistinct. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, bracteate at pedicel base (in distal part of raceme). Peduncle glabrous. Racemes 1, single, bilateral, 8–14 cm long, bearing few fertile spikelets, bearing 4–6 fertile spikelets on each. Rhachis 1 mm wide, glabrous on surface. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 5–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 35–65 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes flattened, 4–7 mm long, pubescent, hairy above. Fertile floret callus pilose. Fertile floret callus hairs 1–1.5 mm long.

**Glumes.** Glumes one the lower absent or obscure, persistent, shorter than spikelet. Upper glume ovate, asymmetrical, 5.5–6.5 mm long, 0.5–0.66 length of adjacent fertile lemma, 1-keeled or 2-keeled, 6 -veined. Upper glume margins eciliate or ciliolate. Upper glume apex acute, mucronate or awned, 1 -awned, awn 0.2–1.8 mm long.

**Florets.** Basal sterile florets 1, barren, with palea or without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, ovate, 9 -veined, with conspicuous midvein, with cross-veins, acute, mucronate or awned. Awn of lower sterile floret 0.5–1.3 mm long. Palea of lower sterile floret 0–0.5 length of lemma. Fertile lemma lanceolate, 8–11.5 mm long, chartaceous, keeled, 9 -veined, more than 3-veined. Lemma margins scaberulous. Lemma apex acute, mucronate or awned, 1 -awned. Principal lemma awn 0.5–2 mm long overall. Palea 1 length of lemma, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, lanceolate, 3–3.5 mm long, membranous, veined, ciliate. Anthers 3, 3.8–5.1 mm long. Stigmas 2. Ovary pubescent on apex. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.
Country /Province /State. Mesoamerica. Costa Rica, Panama.


Illustrations: None found.


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. But sheaths absent. Culms 300–400 cm long, 20 mm diam., woody. Culm-internodes terete, thin-walled, smooth, distally glabrous. Lateral branches dendroid. Bud complement 1. Branch complement several, in a clump, subtended by a bare patch above the node, with 1 branch dominant, thinner than stem. Culm-sheaths present, 15 cm long. Culm-sheath blade lanceolate, erect, 30 cm long, acuminate. Leaves 5–7 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs setose, flat, spreading, 8–12 mm long, dark. Ligule a ciliolate membrane, 0.5 mm long, pubescent on abaxial surface. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3–0.5 cm long, petiole glabrous. Leaf-blades ovate, 18–23 cm long, 35–50 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, flexuous, bilateral, 10–15 cm long, bearing 6–12 fertile spikelets on each. Rhachis semiterete, glabrous on surface. Spikelet packing broadside to rhachis. Spikelets ascending, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 10–14 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 40–50 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes obscured by lemmas.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 4–6 mm long, 0.7–0.8 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 5–8 mm long, 0.5 length of adjacent fertile lemma, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 13–16 mm long, chartaceous, without keel, 1–3 -veined, 0–3 -veined or more than 3-veined, one-veined or several-veined. Lemma lateral veins obscure. Lemma apex acuminate. Palea 11–13 mm long. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.


Distribution (TDWG). Continent. South America.


Illustrations (Journals): Novon (2: 85, Fig. 1 (1992)).


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. But sheaths absent. Culms arching, 500–1000 cm long, 10–15 mm diam., woody. Culm-internodes terete, thick-walled, yellow, distally glabrous. Lateral branches dendroid. Branch complement many, in a clump, subtended by a bare patch above the node. Culm-sheaths present, persistent, glabrous, without auricles. Culm-sheath ligule 0.5 mm high, ciliolate. Culm-sheath blade lanceolate, demarcated but persistent or deciduous, acuminate. Leaves 4–7 per branch. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, 7–16 mm long. Ligule a ciliolate membrane, 0.5–0.6 mm long. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.15–0.25 cm long, petiole pubescent.
Leaf-blades drooping, deciduous at the ligule, lanceolate or oblong, 4–17 cm long, 10–26 mm wide. Leaf-blade surface glabrous. Leaf-blade margins pubescent, hairy at base. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, oblong, secund, 2.5–8 cm long. Primary panicle branches indistinct the panicle almost racemose. Spikelets pectinate, in pairs. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets obvate, laterally compressed, 9.5–14 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet. Lower glume oblong, 0.1–2.5 mm long, chartaceous, without keels, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume ovate, 2–3.5 mm long, 0.33–0.66 length of adjacent fertile lemma, 3–5 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, with palea or without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, ovate, 3.5–5 mm long, 3–7 -veined, acute. Fertile lemma lanceolate or ovate, 6.2–8.2 mm long, chartaceous, keeled, 5–7 -veined, more than 3-veined. Lemma apex acute. Palea 1 length of lemma, 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicles 3, membranous, veined, glabrous. Anthers 3, 3.2–4.2 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp.


**Illustrations (Books):** A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (17, Fig. 1).

**Derivation** (Clifford & Bostock 2007): L. multus, many; spica, thorn; -ata, possessing. Inflorescence with many racemes.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, straight, bilateral, 6–8 cm long, bearing 3–5 fertile spikelets on each. Spikelet packing lax. Rhachis internodes 10–15 mm long. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 15–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3.5 mm long, pubescent.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex obtuse. Upper glume lanceolate. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate, 7 mm long, chartaceous, without keel, more than 3-veined. Lemma apex obtuse, pubescent, mucronate. Palea 1 length of lemma. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.
**Flower and Fruit.** Lodicules 3. Anthers 3, 3 mm long. Stigmas 2. Ovary umbonate. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State. Caribbean, Southern South America.** Cuba, Dominican Republic, Haiti, Puerto Rico, Uruguay.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, straight, bilateral, 4–6 cm long, bearing 5–7 fertile spikelets on each. Spikelet packing lax. Rhachis internodes 10–12 mm long. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 12–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes straight or zig-zag.


**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate or ovate, 8–9 mm long, chartaceous, without keel, more than 3-veined. Lemma lateral veins prominent. Lemma margins ciliolate, hairy above. Lemma apex obtuse, mucronate. Palea 1 length of lemma. Palea keels ciliolate. Palea apex ciliate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 2 mm long. Anthers 3, 4 mm long. Stigmas 2. Ovary umbonate. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State. Caribbean.** Windward Islands.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. folium, leaf. The leaf-blades resemble those of *Pinus*.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Distribution (TDWG). Continent.** South America.
**Country /Province /State.** **Caribbean.** Bahamas, Cuba, Dominican Republic, Haiti, Leeward Is, Puerto Rico.


**TYPE** from Trinidad. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Trinidad: Coll? (LE holo, K).


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 4–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 30–40 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes eventually visible between lemmas.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume elliptic, 3–4 mm long, 0.7–0.8 length of upper glume, chartaceous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 4–5 mm long, 0.5 length of adjacent fertile lemma, without keels, 3–5 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma ovate, 8–9 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma apex acute. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** **Mesoamerica, Caribbean, Northern South America, Western South America.** Costa Rica. Trinidad-Tobago. Venezuela. Colombia.


**TYPE** from Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Colombia, Corregimiento de Virolin: *Diaz-Piedrahita 3399* (COL holo).

**Illustrations (Books):** E.J.Judziewicz et al, *American Bamboos* (1999) (157, Fig. 69).

**Illustrations (Journals):** Novon (8: 416 Fig.3 (1998)).

**Derivation** (Clifford & Bostock 2007): *L. punctum*, small hole; -ulus, diminutive; -ata, possessing.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.
Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 400–700 cm long, 5–10 mm diam., woody. Culm-internodes terete, thin-walled, 18–51 cm long. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement several, in a clump, subtended by a bare patch above the node, with subequal branches, thinner than stem. Culm-sheaths present, persistent, 7.5–15 cm long, 2.5–3 times as long as wide, green and purple, distinctly mottled with last colour, glabrous. Culm-sheath ligule 0.5 mm high. Culm-sheath blade triangular, demarcated but persistent, erect, 5–11 cm long, 18–32 mm wide, pubescent and with ciliate margins. Leaves 4–6(–9) per branch. Leaf-sheaths striately veined, papillose, glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs setose, curly, 6–10 mm long, pale. Ligule a ciliolate membrane, 0.8–1 mm long, pubescent on abaxial surface. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.4–0.7 cm long, petiole pubescent. Leaf-blades ovate, 10–22 cm long, 20–40 mm wide. Leaf-blade midrib indistinct. Leaf-blade vena­tion with distinct cross veins. Leaf-blade surface glabrous or pilose, hairy abaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight, bilateral, 10–15 cm long, bearing few fertile spikelets, bearing 4–8 fertile spikelets on each. Rhachis pilose on surface. Spikelet packing broadside to rhachis. Rhachis internodes 6–26 mm long. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 25–50 mm long, 3–6 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3–5 mm long, pilose.

Glumes. Glumes two or several, 2–3 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, 3.5–5.5 mm long, chartaceous, without keels. Lower glume primary vein scabrous. Lower glume surface glabrous. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 6.5–8 mm long, without keels, 7–9 -veined. Upper glume surface glabrous. Upper glume margins ciliate. Upper glume apex acute, mucronate.

Florets. Fertile lemma ovate, 9–10.5 mm long, 4–5 mm wide, chartaceous, without keel, 7–10 -veined, more than 3-veined. Lemma surface rugulose, without grooves, glabrous. Lemma margins ciliolate. Lemma apex acute, mucronate. Palea 8–9.5 mm long, 3 -veined. Palea keels ciliolate. Apical sterile florets 1 in number, rudimentary.

Flower and Fruit. Lodicules 3, 2–4 mm long, veined, ciliate. Anthers 3, 2–2.5 mm long. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.


Illustrations: None found.


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes borne along a central axis, straight, bilateral, 0.5 cm long. Central inflorescence axis 10–20 cm long, glabrous. Spikelet packing lax. Spikelets solitary. Fertile spikelets sessile.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile floret, 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, curved, subterete, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 0.5 mm long, chartaceous, without keels. Lower glume apex acute. Upper glume lanceolate, 1 mm long. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate or ovate, 4–5 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acute, mucronate. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG). Continent.** South America.

**Country /Province /State.** Caribbean, Northern South America, Western South America. Cuba, Dominican Republic, Haiti, Puerto Rico, Trinidad-Tobago. Venezuela. Colombia.


**Illustrations (Books):** A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (18, Fig. 2).


**Derivation (Clifford & Bostock 2007):** L. *sarmentum*, small branch; -osa, abundance. Culms much branched.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, sinuous, bilateral, 2–4 cm long, bearing 2–5 fertile spikelets on each. Spikelet packing lax. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile floret, 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret.


**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate or ovate, 5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma apex acute, mucronate. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Illustrations (Books):** E.Judziewicz, *Flora of the Guianas*, 187. Poaceae (1990) (73, Fig. 9).

**Illustrations (Journals):** *Systematic Botany* (18: 91, Fig.5 (1993)).


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms arching or leaning or scendent, slender, 500–800 cm long, 5–9 mm diam., woody, rooting from lower nodes. Culm-internodes terete, thick-walled, smooth, distally glabrous. Culm-nodes brown or purple. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement two or three, in a clump, subtended by a bare patch above the node, with subequal branches. Culm-sheaths present, deciduous, distinctly mottled with last colour, glabrous on margins or hairy on margins, without auricles, glabrous on shoulders. Culm-sheath ligule 0.2–0.3 mm high, ciliolate. Culm-sheath blade lanceolate, deciduous, 7–11 cm long. Leaves 5–9 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking or setose, 6–10 mm long, pale or dark. Leaf-sheath auricles erect. Ligule an eciliate membrane, 3–5 mm long, membranous, brown. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.4–0.6 cm long, petirole glabrous. Leaf-blades deciduous at the ligule, lanceolate, 10–23 cm long, 15–45 mm wide. Leaf-blade midrib indistinct. Leaf-blade surface glabrous or puberulous, hairy abaxially. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, straight, bilaterally, 10–25 cm long, bearing 7–12 fertile spikelets on each. Rachis glabrous on surface. Spikelet packing broadside to rachis, lax. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1–3 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both sterile or the upper sterile. Spikelets lanceolate, laterally compressed, 28–40 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes flattened, clavate, 4–7 mm long, eventually visible between lemmas.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume elliptic, 4–5 mm long, chartaceous, without keels, 1–5 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume lanceolate, 6–7 mm long, 1-keeled, keeled above, 5–7 -veined. Upper glume apex acute, mucronate.

**Florets.** Basal sterile florets 1, barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate or ovate, 9–11 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma apex acute, mucronate. Palea 1 length of lemma. Palea surface puberulous, hairy on back. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.

**Country/Province/State.** Northern South America. Guyana, Surinam, Venezuela.

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**Illustrations (Books):** J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (37, Fig. 19).

**Illustrations (Journals):** *Systematic Botany* (18: 94, Fig.6 (1993)).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Inflorescence. Inflorescence composed of racemes. Racemes 1, single, bilateral, 7–12 cm long, bearing few fertile spikelets, bearing 4–7 fertile spikelets on each. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. simplicior, simpler; -ula, diminutive.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Inflorescence. Inflorescence composed of racemes. Racemes 1, single, bilateral, 7–12 cm long, bearing few fertile spikelets, bearing 4–7 fertile spikelets on each. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets sessile.
**Fertile Spikelets.** Spikelets comprising 6–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 45–60 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 5–6 mm long, 0.66 length of upper glume, chartaceous, without keels. Lower glume apex acute. Upper glume lanceolate, 8–9 mm long, 0.9 length of adjacent fertile lemma, chartaceous, without keels. Upper glume apex acute.

**Florets.** Fertile lemma elliptic, 9–11 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acute, awned, 1-awned. Principal lemma awn 1.5–3 mm long overall. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.
Country /Province /State. Western South America, Brazil. Colombia, Ecuador, Peru. Brazil West Central, Brazil North.
Amazonas.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, slender, 500–700 cm long, woody. Culm-internodes terete, thick-walled, smooth, distally glabrous. Lateral branches fastigiate. Branch complement many, in a clump, subtended by a bare patch above the node, with subequal branches. Culm-sheaths present. Leaf-sheaths mostly shorter than adjacent culm internode, puberulous. Leaf-sheath oral hairs scanty, curly or deciduous, 3–5 mm long, pale. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades spreading or reflexed, deciduous at the ligule, linear or lanceolate, 5–13 cm long, 3–5 mm wide, stiff. Leaf-blade surface puberulous, hairy abaxially or on both sides. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume surface puberulous. Lower glume apex obtuse. Upper glume lanceolate, 1.5–2 mm long, 1.5–2 length of adjacent fertile lemma. Upper glume surface puberulous. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, elliptic, 2.5 mm long, puberulous, obtuse. Fertile lemma lanceolate or ovate, 4.5–5 mm long, chartaceous, without keel, 5–7 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma surface puberulous. Lemma apex acute, mucronate. Palea 1 length of lemma. Palea keels ciliolate, adorned above. Palea surface puberulous, hairy on back. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): from Venezuela.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms rambling or scandent, slender, 300–800 cm long, 10–30 mm diam., woody. Culm-internodes terete, thick-walled or solid, scaberulous, distally glabrous or pubescent, with reflexed hairs. Culm-nodes pubescent. Lateral branches dendroid. Bud complement 1. Branch complement in a clump, subtended by a bare patch above the node, with 1 branch dominant, thinner than stem. Culm-sheaths present, glabrous, without auricles. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, 5–9 mm long, dark. Ligule a ciliolate membrane, 0.2 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.35 cm long, petiole pubescent. Leaf-blades deciduous at the ligule, ovate, 5–14 cm long, 10–15 mm wide, dark green. Leaf-blade surface pilose, sparsely hairy, hairy abaxially.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, flexuous, bilateral, 5–8 cm long. Rachis semiterete. Spikelet packing broadside to rachis, distant. Spikelets ascending, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 4–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 10–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes flattened, clavate, 4.5–7 mm long, eventually visible between lemmas, sparsely hairy, hairy at tip.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume elliptic, 3–4 mm long, 0.7–0.8 length of upper glume, chartaceous, without keels, 4 -veined. Lower glume apex acute. Upper glume elliptic, 4–5 mm long, 0.66 length of adjacent fertile lemma, without keels, 7 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma ovate, 6–7.5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex obtuse. Palea 1 length of lemma. Palea keels ciliolate, adored above. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3. Anthers 3, 3.2–3.5 mm long, yellow. Stigmas 2. Ovary umbionate. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. North America, South America.


**TYPE** from Colombia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Colombia, Corregimiento Virolin: *Diaz-Piedrahita* 4048 (COL holo).

**Illustrations (Journals):** *Novon* (8: 418 Fig.4 (1998)).

**Derivation** (Clifford & Bostock 2007): L. *ense*, denoting origin. From Corregiminetio Virolin, Colombia.
**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 200–300 cm long, 1–3 mm diam., woody. Culm-internodes terete, solid, 7–21 cm long, papilllose, distally glabrous. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement several, in a clump, subtended by a bare patch above the node, with 1 branch dominant or 2 branches dominant, thinner than stem. Culm-sheaths present, persistent, 2–4 cm long, 4 times as long as wide, hispid, ciliate on shoulders, shoulders with curved hairs, shoulders with 1 mm long hairs. Culm-sheath ligule 0.2 mm high, ciliolate. Culm-sheath blade lanceolate, demarcated but persistent, erect, 0.9–2.1 cm long, 1–2 mm wide, hispid. Leaves 8–12 per branch. Leaf-sheaths striate, hispid, outer margin hairy. Leaf-sheath oral hairs setose, curly, 3–5 mm long. Ligule a ciliolate membrane, 0.1–0.2 mm long. Collar with external ligule. Leaf-blade base with a brief petiolar-like connection to sheath, petiole 0.08–0.1 cm long, petiole pubescent. Leaf-blades lanceolate, 1–4.5 cm long, 2–4.5 mm wide, mid-green and light green, discolorous with last colour beneath. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acute.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, bilateral, 3–4 cm long, bearing few fertile spikelets, bearing 1–4 fertile spikelets on each. Rhachis pilose on surface. Spikelet packing broadside to rhachis. Rhachis internodes 5–7 mm long. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 10–16 mm long, 1.5–4 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1.5–2 mm long, pilose.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 1.5–2.5 mm long, chartaceous, without keels, 3 -veined. Lower glume surface hispid. Lower glume apex obtuse. Upper glume ovate, 2.5–3 mm long, without keels, 5 -veined. Upper glume surface hispid. Upper glume apex obtuse.

**Florets.** Fertile lemma ovate, 4–4.5 mm long, 2–2.5 mm wide, chartaceous, purple, without keel, 5–6 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma surface rugulose, without grooves, glabrous or hispidulous. Lemma margins ciliolate, hairy above. Lemma hairs 4–4.5 mm long. Lemma apex acute. Palea keels eciliate. Palea apex pubescent. Apical sterile florets 1 in number, lanceolate.

**Flower and Fruit.** Lodicules 3, 1–1.5 mm long, veinless. Anthers 3, 2.5–3 mm long, pallid or yellow. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country/Province/State.** Western South America. Colombia.


**Illustrations (Journals):** *Systematic Botany* (18: 97, Fig.7 (1993)).

**Derivation** (Clifford & Bostock 2007): in honor of Stephen M. Young (fl. 1980), collector of bamboos in Ecuador.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, pendulous at the tip, 1200 cm long, 5–15 mm diam., woody. Culm-internodes terete, smooth, distally glabrous. Culm-nodes swollen (corky). Lateral branches dendroid. Bud complement 1. Branch complement several, in a clump, subtended by a bare patch above the node, with 1 branch dominant, thinner than stem. Culm-sheaths present, tardily deciduous, 11–26 cm long, asymmetrical at apex, ciliate on shoulders. Culm-sheath blade lanceolate, 6–12 cm long, 10–20 mm wide. Leaves 3–5 per branch. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, 3–5 mm long, dark. Ligule a ciliolate membrane, 0.1–0.2 mm long. Collar with external ligule. Leaf-blade base with a brief petiolar-like connection to sheath, petiole 0.2–0.4 cm long. Leaf-blades lanceolate, 9–15 cm long, 13–28 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.
**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, straight, bilateral, 4–10 cm long, bearing few fertile spikelets, bearing 4–8 fertile spikelets on each. Rhachis 1 mm wide, glabrous on surface. Spikelet packing broadside to rhachis, lax. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 3–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 13–28 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes 2–3 mm long.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 3.3–6.5 mm long, chartaceous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume lanceolate, 4–8.5 mm long, without keels, 3–7 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate, 7.5–10.5 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma apex acute. Palea surface puberulous, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3. Anthers 3, 2 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia, Ecuador.


**Illustrations:** None found.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China Southeast.

Guangdong.


**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Southeastern USA. Georgia, North Carolina, South Carolina, Tennessee.


**Accepted by:** W.D. Clayton & K. Harman, *GrassBase* (2008) and online.

Illustrations: None found.


Fertile Spikelets. Spikelets comprising 5–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 30 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5 mm long, pubescent. Floret callus disarticulating obliquely.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate or ovate, 6 mm long, chartaceous, without keels. Lower glume margins ciliate. Lower glume apex acute. Upper glume lanceolate or ovate, 8.5–9 mm long, chartaceous, without keels, 9 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 9–9.5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Palea 10 mm long. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

TYPE from Japan,. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Hikamigun: Ohda.

Illustrations: None found.

Derivation: L. caudex, stem; -ceps, relating to the head. Leaves retained in clumps on the upper nodes of the culms.


Illustrations: None found.


Derivation: L. weak. Culms decumbent often much branched at the base.


Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–6 cm long, 2–3 cm wide. Primary panicle branches ascending or spreading. Panicle branches glabrous, with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 3–5 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes flattened, 4–6 mm long, glabrous or sparsely hairy, hairy at tip.

Glumes. Glumes deciduous, similar, shorter than spikelet. Lower glume ovate, 4–5.5 mm long, chartaceous, without keels, 7 -veined. Lower glume apex acute. Upper glume ovate, 5.4–6.8 mm long, chartaceous, without keels, 7 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 7–10.2 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma apex acute. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicles 3, 2 mm long, ciliate. Anthers 3, 5 mm long, yellow. Stigmas 2. Caryopsis with adherent pericarp, apex unappendaged.


Illustrations: None found.


Inflorescence. Inflorescence a panicle, comprising 3–15 fertile spikelets. Panicle open, lanceolate, 2–3.5 cm long, 1 cm wide, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose or simple or sparsely divided. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 3–6 mm long.
**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension or with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 10 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 4.5–6 mm long, chartaceous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex attenuate, awned, 1 -awned, awn 2–3 mm long. Upper glume ovate, 6–7 mm long, chartaceous, without keels, 7 -veined. Upper glume primary vein scabrous. Upper glume apex attenuate, awned, 1 -awned, awn 2–3 mm long.

**Florets.** Fertile lemma lanceolate, 8–10 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface scabrous. Lemma apex acute, awned, 1 -awned. Principal lemma awn 2–3 mm long overall. Palea 7.5–8.5 mm long. Palea keels contiguous above a sulcus, scabrous. Palea apex scaberulous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 2 mm long, veined, ciliate. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, apex unappendaged. Hilum linear, 1 length of caryopsis.

**Distribution (TDWG).** Continent. Tropical Asia.


Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 147).


**Fertile Spikelets.** Spikelets comprising 4–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 15–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhabdilla internodes clavate, pubescent, hairy all along but hairs longer above.

**Glumes.** Glumes two, persistent, similar, shorter than spikelet. Lower glume lanceolate, 5–7 mm long, chartaceous, without keels. Lower glume apex acuminate. Upper glume ovate, 7–8 mm long, chartaceous, without keels. Upper glume apex acuminate.

**Florets.** Fertile lemma ovate, 7–9 mm long, chartaceous, dark brown, without keel, more than 3-veined. Lemma surface glabrous, inner surface pilose. Lemma margins ciliolate. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 1–3 mm long overall. Palea 1 length of lemma. Palea apex emarginate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, glabrous or ciliate. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, apex unappendaged.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China South Central, China North-Central.

Gansu, Shaanxi. Hubei, Sichuan.


Illustrations: None found.


Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–20 cm long, 8–10 cm wide. Panicle branches glabrous, with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 7–8 mm long.

Fertile Spikelets. Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 25–35 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 3.8–5.6 mm long, chartaceous, without keels, 5 -veined. Lower glume margins ciliolate. Lower glume apex acute. Upper glume ovate, 5.5–6.1 mm long, chartaceous, without keels, 7 -veined. Upper glume margins ciliolate. Upper glume apex acute.

Florets. Fertile lemma ovate, 8.5–10 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma apex apiculate. Palea keels contiguous above a sulcus, winged. Palea surface scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 1.5–2 mm long, veined, ciliate. Anthers 3, 4.3–6 mm long, orange. Caryopsis with adherent pericarp, apex unappendaged.


TYPE from USA. Basionym or Replaced Name: Arundo gigantea Walter, Fl. Carol. 81 (1788). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: USA: [South Carolina],.

Recent Synonyms: Arundinaria tecta (Walter) Muhl.


Illustrations (Journals): Smithsonian Contributions to Botany (9: 27, Fig. 7, 29; Fig. 8, 31; Fig. 9; 33; Fig. 10; 35; Fig.11, 37; Fig. 12; 39, Fig.13; 41, Fig. 14; 43, Fig.15; 45, Fig. 16 (1973)).


Derivation (Clifford & Bostock 2007): L. very large. Culms tall compared with those of related species.
**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 6–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 40–70 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes pubescent.

**Glumes.** Glumes one the lower absent or obscure or two or several, 1–2 empty glumes, persistent, similar, shorter than spikelet. Lower glume lanceolate, 0.3–0.7 length of upper glume, chartaceous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume elliptic, 0.5 length of adjacent fertile lemma, chartaceous, without keels, 7–9 -veined. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 15–25 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface puberulous, hairy below. Lemma apex attenuate, muticous or mucronate or awned, 1 -awned. Principal lemma awn 0–5 mm long overall. Palea 1 length of lemma, 2 -veined. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent (*), Europe (*), North America.

**Region.** Northern Europe (*).


**Arundinaria graminea** (Bean) Makino. Bot. Mag., Tokyo, 26: 18 (1912).


**Illustrations (Books):** C-C Hsu, *Taiwan Grasses* (1975) (714, Pl. 1484).

**Derivation (Clifford & Bostock 2007):** L. *gramen*, grain. In some respect resembling a cereal.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes elongated, leptomorph. Butt sheaths absent. Culms erect, 300–500 cm long, 5–20 mm diam., woody. Culm-internodes terete, thin-walled, 10–25 cm long, distally glabrous. Culm-nodes glabrous. Lateral branches dendroid. Branch complement two or three. Culm-sheaths present, deciduous, coriaceous, glabrous, without auricles. Culm-sheath blade linear. Leaves 5–11 per branch. Leaf-sheaths 2.5–4 cm long, glabrous on surface. Leaf-sheath oral hairs scanty or setose, 4–6 mm long, pale. Ligule an eciliate membrane or a ciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long. Leaf-blades deciduous at the ligule, linear or lanceolate, 10–30 cm long, 5–17 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence comprising only a few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 5–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the
upper sterile. Spikelets linear, laterally compressed, 25–45 mm long, 5–8 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 4–5 mm long, pubescent.

**Glumes.** Glumes two, persistent, similar, shorter than spikelet. Lower glume lanceolate, 16–20 mm long, chartaceous, without keels, 7 -veined. Lower glume apex acute. Upper glume lanceolate, chartaceous, without keels, 11 -veined. Upper glume apex acute.


**Flower and Fruit.** Lodicles 3, ovate, veined, ciliate. Anthers 3, 7 mm long. Stigmas 3. Caryopsis with adherent pericarp, fusiform, 7–8 mm long, dark brown, apex unappendaged.

**Distribution (TDWG).** Continent. Temperate Asia, Australasia.


**Arundinaria humilis** Mitford. *Bamboo Garden*, 103 (1896).


TYPE from UK, cultivated. T:<Type of Basionym>: *fide TROPICOS* and Kew Synonomy Database: cult. England..


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. low growing. Short-statured in comparison with related species often prostrate.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, bearing few fertile spikelets, bearing 2–4 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 5–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 40–60 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5–6 mm long, eventually visible between lemmas.

**Glumes.** Glumes two, persistent, shorter than spikelet. Lower glume linear, 6–7 mm long. Lower glume apex attenuate. Upper glume lanceolate, 9–12 mm long, chartaceous, without keels. Upper glume apex attenuate.

**Florets.** Fertile lemma elliptic, 12–15 mm long, chartaceous, without keel, 11–13 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma apex acuminate. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. Europe (*), Temperate Asia.

Region. Northern Europe (*).


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): In honor of Masayuki Kodzuma.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

Type from Japan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Japan,.

Illustrations: None found.


Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes elongated, leptomorph. Butt sheaths absent. Culms erect, 100–200 cm long, 5–8 mm diam., woody. Culm-internodes terete, thin-walled, distally pubescent. Culm-nodes pubescent or bearded. Lateral branches lacking or sparse. Culm-sheaths present, puberulous, with reflexed hairs. Leaf-sheaths puberulous, with simple hairs or reflexed hairs. Leaf-sheath oral hairs setose, erect. Ligule an eciliate membrane or a ciliolate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 15–20 cm long, 18–30 mm wide. Leaf-blade surface puberulous, densely hairy, hairy abaxially or on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 6–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 40–50 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes one the lower absent or obscure, persistent, shorter than spikelet. Upper glume lanceolate, chartaceous, without keels. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 13–15 mm long, chartaceous, without keel, more than 3-veined. Lemma lateral veins with cross-veins. Lemma apex acuminate. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


Derivation (Clifford & Bostock 2007): L. *linea*, linen thread; -are, pertaining to. Leaf blades narrow.


sheath blade linear. Leaves 5–9 per branch. Leaf-sheaths 3–5 cm long, glabrous on surface. Leaf-sheath oral hairs scanty, 6–8 mm long, pale. Ligule an eciliate membrane or a ciliolate membrane, 1.5–4 mm long, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2 cm long. Leaf-blades deciduous at the ligule, linear or lanceolate, 6–28 cm long, 5–10 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate, filiform.

Inflorescence. Inflorescence comprising only a few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 7–15 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 50–100 mm long, 3–4 mm wide, breaking up at maturity, disarticulating below each fertile floret.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.

T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: nom. inval., the words type or holotype not cited (Art. 37.4).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Munsu, South Korea.


Inflorescence. Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 30 mm long, 5 mm wide, breaking up at maturity, disarticulating below each fertile floret.


Florets. Fertile lemma lanceolate, 22 mm long, chartaceous, without keel, 11 -veined, more than 3-veined. Lemma apex setaceously acuminate. Palea 19 mm long. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, lanceolate, 4.5–5 mm long, ciliate. Anthers 3, 5 mm long. Stigmas 3. Caryopsis with adherent pericarp.


Basionym or Replaced Name: Bambusa nagashima Marliac ex Mitford, Bamb. Gard. 46: 547 (1894).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): From Nagashima Island, Japan.


Inflorescence. Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 6–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 45–50 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume lanceolate, 12 mm long, chartaceous, without keels. Lower glume apex acute. Upper glume lanceolate, chartaceous, without keels. Upper glume apex acute.

Florets. Fertile lemma ovate, 12–15 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma apex acuminate. Apical sterile florets resembling fertile though underdeveloped.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. dwarf. Culms shorter than those of many other species in the genus.


Inflorescence. Inflorescence comprising only a few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 40–60 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5–7 mm long, eventually visible between lemmas.

Glumes. Glumes two, persistent, similar, shorter than spikelet. Lower glume lanceolate, 8–10 mm long, chartaceous, without keels. Lower glume apex acute. Upper glume lanceolate, 8–10 mm long, chartaceous, without keels. Upper glume apex acute.

Florets. Fertile lemma ovate, 13–16 mm long, chartaceous, without keel, 5–7-veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma apex acuminate. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


Region. Northern Europe (*).
Sikkim. Assam. Orissa, Uttah Pradesh.


Basionym or Replaced Name: Bashania aristata Y. Ren, Yun Li & G.D. Dang, Novon 13(4): 473–475, pl. 1 (2003).

Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 146).


Habit, Vegetative Morphology. Perennial, woody bamboo. Butt sheaths absent. Culms 200–400 cm long, 3–10 mm diam., woody. Culm-internodes terete, solid, 40–45 cm long, dark green, distally glabrous. Culm-nodes glabrous. Lateral branches dendroid. Culm-sheaths present, green or purple, hispid, hairy on margins, without auricles, setose on shoulders, shoulders with 3–4 mm long hairs. Culm-sheath ligule 0.5–1 mm high, purple. Culm-sheath blade lanceolate or triangular. Leaves 1–3 per branch. Leaf-sheaths puberulous. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles erect. Ligule an eciliate membrane, 1 mm long, truncate. Leaf-blade base cuneate, with a brief petiole-like connection to sheath, petiole 0.3–0.4 cm long, petiole glabrous. Leaf-blades lanceolate, 22–32 cm long, 24–34 mm wide. Leaf-blade venation with 12–16 secondary veins. Leaf-blade surface scabrous, glabrous. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 5–14 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 5–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes clavate, 3–5 mm long, pubescent.

**Florets.** Fertile lemma ovate, 7–8 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pilose, inner surface pilose. Lemma margins ciliolate. Lemma apex acuminate, mucronate. Palea 8–9 -veined. Palea surface pilose, hairy on margins. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, ovate, ciliate. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, ellipsoid, 7–8 mm long, apex unappendaged.

**Distribution (TDWG).** Continent. Temperate Asia.


Illustrations: None found.


Illustrations: None found.


**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, pendulous at the tip, 700–800 cm long, 10–15 mm diam., woody. Culm-internodes terete, thick-walled, distally hirsute. Lateral branches dendroid. Bud complement 1. Branch complement several, in a clump, thinner than stem. Culm-sheaths present, persistent, brown or purple, pilose, with appressed hairs, without auricles. Culm-sheath ligule 1.7 mm high, dentate. Culm-sheath blade lanceolate, deciduous, spreading, 10–12 cm long, 2.5 mm wide, scabrid, acute. Leaves 0 per branch (not in complements). Ligule an eciliate membrane, 0.5 mm long, erose. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath, petiole 0.05 cm long. Leaf-blades oblong, 6–9 cm long, 16–23 mm wide, mid-green or mid-green or glaucous, concolorous or discolorous with last colour beneath. Leaf-blade midrib prominent beneath. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade margins smooth. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 6–7 cm long, 6 cm wide. Primary panicle branches ascending or spreading. Panicle branches stiff, glabrous, with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 10–20 mm long.

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3–5 mm long, pubescent, hairy above.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 2.7–3.6 mm long, chartaceous, without keels, 5 -veined. Lower glume lateral veins with cross-veins. Lower glume apex acute. Upper glume ovate, 3.9–4.5 mm long, chartaceous, without keels, 5 -veined. Upper glume lateral veins with cross-veins. Upper glume inner surface pubescent. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 6.3–7.5 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma inner surface pubescent. Lemma apex acute. Palea 7 -veined. Palea keels winged. Palea surface puberulous, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 1.6–1.7 mm long, ciliate. Anthers 3, 5 mm long. Stigmas 2. Caryopsis with adherent pericarp, apex unappendaged.
**Distribution (TDWG).** Continent: Tropical Asia.  


Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online.  

**Illustrations:** None found.  

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Distribution (TDWG).** Continent: Temperate Asia.  


**TYPE** from China. *Basionym or Replaced Name:* *Bambusa simonii* Carrière, *Rev. Hort.* 37: 380 (1866)


**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo. Rhizomes elongated, leptomorph. Butt sheaths absent. Culms erect or arching, 600–800 cm long, 20 mm diam., woody. Culm-internodes terete, thin-walled, 40–45 cm long, distally glabrous. Lateral branches dendroid. Branch complement three or several, with subequal branches, thinner than stem. Culm-sheaths present, persistent, glabrous, hairy on margins, without auricles, glabrous on shoulders. Culm-sheath ligule 3–4 mm high. Culm-sheath blade linear or lanceolate, reflexed, glabrous on surface. Leaf-sheaths 25 cm long, striately veined, glabrous on surface. Leaf-sheath oral hairs scanty, pale. Ligule an eciliate membrane or a ciliolate membrane, 3–4 mm long, truncate or obtuse. Leaf-blade base cuneate, with a brief petiole-like connection to sheath, petiole glabrous. Leaf-blades deciduous at the ligule, lanceolate, 5–30 cm long, 15–35 mm wide, mid-green or glaucous, with undersurface a different shade on either side of midrib. Leaf-blade venation with 8–12 secondary veins, with distinct cross veins.

**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, subtended by a spatheole, embraced at base by subtending leaf. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 5–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 40–70 mm long, breaking up at maturity,
disarticulating below each fertile floret. Rhachilla internodes eventually visible between lemmas, pilose, hairy at tip.

**Glumes.** Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acute. Upper glume ovate, chartaceous, without keels. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 9 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acuminate. Palea 1 length of lemma, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG). Continent.** Europe (*), Temperate Asia, South America (+).


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Inflorescence composed of racemes, bracteate at pedicel base. Racemes bearing 2–3 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 10–15 mm long.

**Fertile Spikelets.** Spikelets comprising 3–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 15–37 mm long, 1.5–3 mm wide, breaking up at maturity, disarticulating below each fertile floret.


**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** China. China Southeast.

Fujian, Zhejiang.


**Basionym or Replaced Name:** *Pleioblastus auricomus* (Mitford) Bergmans, *Vaste Pl. Rotsheest.*, ed. 2, 677 (1939).


**Illustrations (Journals):** Hooker's *Icones Plantarum* (t.2613 (1899) as *A. auricoma*).

**Derivation** (Clifford & Bostock 2007): L. *viridis*, green; *striatus*, striated. Leaf-blades variegated.

**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 6–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 40–50 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes one the lower absent or obscure, persistent, shorter than spikelet. Upper glume lanceolate, 10–23 mm long, chartaceous, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic, 13–15 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma apex acuminate. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG). Continent.** Temperate Asia, Australasia.

**Country /Province /State.** Caucasus, Eastern Asia. Transcaucasus. Japan. **New Zealand** (*). New Zealand North I, New Zealand South I.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 100–200 cm long, woody. Culm-internodes terete, thin-walled, smooth. Lateral branches dendroid. Bud complement 1. Branch complement many, in a clump, thinner than stem. Culm-sheaths present, deciduous, yellow or green, pilose, hairy at the base, hairy on margins, without auricles, ciliate on shoulders, shoulders with 3–5 mm long hairs. Culm-sheath ligule 0.5–1 mm high, ciliate. Culm-sheath blade narrowly ovate, spreading, 2–3 cm long, 5 mm wide, acute. Leaves 10–20 per branch. Leaf-sheath oral hairs ciliate, 3–4 mm long. Ligule a ciliolate membrane, 0.2 mm long. Leaf-blade base cordate, with a brief petiole-like connection to sheath, petiole 0.2–0.25 cm long. Leaf-blades deciduous at the ligule, elliptic, 5–15 cm long, 10–50 mm wide, indurate. Leaf-blade midrib prominent beneath. Leaf-blade venation with distinct cross veins. Leaf-blade margins cartilaginous, scabrous. Leaf-blade apex acute.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 14–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes pubescent, hairy above.

Glumes. Glumes deciduous, similar, shorter than spikelet. Lower glume ovate, 5.8 mm long, chartaceous, without keels, 7 -veined. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 6.5 mm long, 0.2–0.33 length of adjacent fertile lemma, chartaceous, without keels, 7 -veined. Upper glume margins ciliate. Upper glume apex acute.


Flower and Fruit. Lodicules 3, 1.4 mm long, veined, ciliate. Anthers 3, 5 mm long, orange. Stigmas 3. Caryopsis with adherent pericarp, ellipsoid, sulcate on hilar side, 5 mm long, apex unappendaged. Embryo 0.2 length of caryopsis. Hilum linear, 1 length of caryopsis.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 788).


Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 100 cm long, 3 mm diam., 1–2 -noded. Culm-internodes smooth. Culm-nodes swollen, bearded. Leaf-sheaths longer than adjacent culm internode, pilose, outer margin hairy. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 5–35 cm long, 3–7 mm wide, glaucous. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins scabrous.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 4.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse. Floret callus hairs 0.25 length of lemma.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 3.5–4 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3–5 -veined. Lower glume surface smooth or asperulous, rough on veins. Lower glume apex acuminate. Upper glume ovate, 4.5–5.5 mm long, membranous, glaucous, 1-keeled, 7 -veined. Upper glume surface smooth or asperulous, rough on veins. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 4 mm long, membranous, glaucous, 1-keeled, 5 -veined, acute. Fertile lemma lanceolate, 2.5–3 mm long, coriaceous, light brown, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex awned, 3 -awned. Principal lemma awn straight, 6 mm long overall. Lateral lemma awns present, 2 mm long. Palea coriaceous, 2 -veined. Palea surface asperulous.

**Distribution (TDWG).** Continent. Temperate Asia. Tropical Asia.


**TYPE** from Santo Domingo. **Basionym or Replaced Name:** Trichochloa berteroniana Schult., Mantissa 2: 209 (1824)

. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: T: Bertero s.n., Dominican Republic: Santo Domingo (BM, M?, TO?).

**Illustrations (Books):** F.O. Zuloaga, Z.E. Rugolo & A.M. Anton, Flora Argentina 3 – 1, Aristidoideae a Pharoideae (2012) (251), S.A. Renvoize, Gramineas de Bolivia (1998) (561, Fig. 130), E.G. Nicora, Los Generos de Gramineas de America Austral (1987) (419, Fig. 148), G. Harling & C. Persson, Flora of Ecuador (2006) (78: 171, Fig. 20 (2006)).

**Illustrations (Journals):** Ruizia (13:422 Fig 56a-b (1993)).


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 75–115 cm long, 1.5–2 mm diam. Culm-internodes thin-walled. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths hispid, with tubercle-based hairs. Leaf-sheath oral hairs bearded. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 25–35 cm long, 3–6 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins cartilaginous.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, lanceolate, dense, 20–40 cm long, 4–6 cm wide, contracted about primary branches. Primary panicle branches appressed, 10–15 cm long. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets cuneate, laterally compressed, 4.2–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, recurved at apex or gaping. Lower glume lanceolate, 3.2–4.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface scabrous, rough on veins. Lower glume apex acuminate. Upper glume lanceolate, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume apex caudate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, membranous, 1-keeled, 3–5 -veined, acute. Fertile lemma lanceolate, 1.5–1.8 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate. 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight or geniculate, 8–13 mm long overall, without a column or with a straight or slightly twisted column. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 0.6–0.7 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

\[2n = 20\] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Western South America, Brazil, Southern South America. Cuba, Dominican Republic, Haiti. Bolivia, Colombia, Ecuador, Peru. Brazil South.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India.

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, robust, 20–35 cm long. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blade base broadly rounded. Leaf-blades linear or lanceolate, 15–27 cm long, 7–14 mm wide, flaccid. Leaf-blade surface hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculicate-ciliate. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, recurved at apex or gaping. Lower glume elliptic, 3–3.25 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3–5 -veined. Lower glume surface pilose, with tubercle-based hairs. Lower glume apex acuminate, awned, 1 -awned. Upper glume elliptic, 4.5–4.75 mm long, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume primary vein scabrous. Upper glume apex caudate.

**Florets.** Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, oblong, 3 mm long, 1 length of spikelet, membranous, 1-keeled, 3 -veined, obtuse. Fertile lemma elliptic or oblong, 2 mm long, coriaceous, dark brown, without keel. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6 mm long overall, with twisted column. Column of lemma awn 2.5 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicles 2, cuneate, fleshy. Anthers 3, 0.75–1 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indo-China. Myanmar.

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**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk. blepharis, eye-lash; phyllon, leaf. The leaf margins bear long stiff widely separated hairs.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous, obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 2.5 mm long, 0.75 length of upper glume, membranous, purple, 1-keeled, 3 -veined. Lower glume surface scabrous, rough on veins. Lower glume apex acute. Upper glume elliptic, 3.5 mm long, 2 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface scabrous, rough on veins. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 2.75 mm long, membranous, 1-keeled, 3 -veined, acute. Fertile lemma oblong, 1.75 mm long, coriaceous, light brown, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex entire, obtuse, muticous. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface pubescent, hairy above, with turgid hairs.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1–1.2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG). Continent.** Tropical Asia.

**Country /Province /State.** Indian Subcontinent. Sri Lanka.


**TYPE from India.** T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Cannanore District, Kumbla to Beduka: Sreekumar 71822 (CAL holo, K, MH).

**Illustrations:** None found.


**Habit, Vegetative Morphology.** Annual. Culms erect, slender, 20–60 cm long. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths 1–8 cm long, striately veined, outer margin glabrous or hairy. Ligule a fringe of hairs. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 2–5 cm long, 2–5 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade margins glabrous or tuberculate-ciliate.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, ovate, 10–40 cm long. Primary panicle branches ascending, 1–12 cm long. Panicle branches angular, bearded in axils. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, 2–15 mm long, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, acuminate, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse. Floret callus hairs 0.25–0.5 mm long.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3.5–4.5 mm long, 0.75 length of upper glume, membranous, purple, 1-keeled, 3 -veined. Lower glume lateral veins prominent. Lower glume apex acute. Upper glume ovate, 5–5.5 mm long, 2 length of adjacent fertile lemma, 1 length of spikelet, membranous, mid-green and purple, 5 -veined. Upper glume lateral veins prominent. Upper glume apex caudate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, oblong, 2.75–3 mm long, membranous, light green, 1-keeled, 5 -veined, obscurely veined, with unevenly spaced veins, obtuse. Palea of lower sterile floret 2–2.5 mm long. Fertile lemma ovate, 1.75–2 mm long, coriaceous, dark brown, without keel. Lemma surface papillose. Lemma margins involute, interlocking with palea keels. Lemma apex awned, 1 -awned. Principal lemma awn from
a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn 4 mm long. Palea with auriculate flaps, 1.25–1.5 mm long, coriaceous, 2 -veined. Palea surface papillose.

**Flower and Fruit.** Lodicules 2, cuneate, 0.3 mm long, fleshy. Anthers 3, 1–2 mm long, purple.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India.

Kerala.


**Basionym or Replaced Name:** *Holcus ciliatus* Roxb., *Fl. Ind.* 1: 321 (1820).


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 30–60 cm long. Culm-internodes distally glabrous or pilose. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane or a ciliolate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate or oblong, 7–15 cm long, 7–14 mm wide, flaccid. Leaf-blade surface pilose, hairy adaxially or on both sides, with tubercle-based hairs. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle contracted, linear, 5–12 cm long, contracted about primary branches. Primary panicle branches 1–3(–5) cm long. Panicle axis scabrous, glabrous or pilose, with tubercle-based hairs. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic, 2.5–3.5 mm long, 0.75–1 length of upper glume, membranous, 1 -keeled, 3 -veined. Lower glume surface pilose, hairy below, with tubercle-based hairs. Lower glume apex acute, awned, 1 -awned. Upper glume elliptic, 3.5 mm long, 2.5–3 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface pilose, hairy below, with tubercle-based hairs. Upper glume apex cajudate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, elliptic or oblong, 1.25–2.5 mm long, 0.5–0.75 length of spikelet, membranous, 1-keeled, 3 -veined, acute, awned. Fertile lemma elliptic or oblong, 1–1.5 mm long, coriaceous, palid, without keel. Lemma lateral veins obscure. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5–7 mm long overall, with twisted column. Column of lemma awn 2.5–3 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 0.25–0.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

\( n = 9 \) (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent, Malesia. Lesser Sunda Is, Philippines.

Tamilnadu.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 795).

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Cochinchina, now included in Laos and Cambodia.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, robust, 250 cm long, 4–6 mm diam. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, glabrous on surface, outer margin glabrous or hairy. Ligule an eciliate membrane. Leaf-blades 60 cm long, 20 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicule, bearing juvenile spikelets at emergence. Panicle contracted, oblong, interrupted, 60 cm long. Primary panicle branches appressed, bearing spikelets almost to the base. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 1–4 mm long, scaberulous, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, recurved at apex. Lower glume lanceolate or ovate, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate. Upper glume lanceolate, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 3–5 -veined. Upper glume apex cuate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 1-keeled, 3 -veined, obtuse. Fertile lemma lanceolate, 2 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, gericulate, 4 mm long overall, with twisted column. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.


**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


Guangxi, Guizhou, Yunnan.

**Arundinaria wightiana** Nees. *Linnaea* 9: 482 (1834).


**Classification.** Subfamily Bambusoideae. Tribe: Arundinarieae.


Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 12–18 cm long, 20–25 mm wide. Leaf-blade venation with 10–14 secondary veins, with distinct cross veins. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes flattened, clavate, pubescent.


Flower and Fruit. Lodicules 3, veined, ciliate. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp, ellipsoid, sulcate on hilar side, 2.5–5 mm long, apex unappendaged.

Country /Province /State. Indian Subcontinent. India.


Accepted by: W.D Clayton & K.Harman, GrassBase (2008) and online.


Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly, hairy. Culms erect or geniculately ascending, 100–200 cm long. Culm-nodes glabrous or bearded. Lateral branches lacking or sparse. Leaf-sheaths pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane. Leaf-blades 20–60 cm long, 10–20 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous, glabrous or ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, bearing juvenile spikelets at emergence. Peduncle glabrous. Panicle contracted, linear, 15–30 cm long, 1–3 cm wide, contracted about primary branches. Primary panicle branches ascending, 1–2.5 cm long, bearing spikelets almost to the base. Panicle axis smooth or scabrous, with scattered hairs or hispid. Panicle branches scabrous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume elliptic, 3–3.2 mm long, 0.9 length of upper glume, membranous, 1-keeled, 3–5 -veined. Lower glume surface hispid. Lower glume apex acute. Upper glume elliptic, 3.2–3.8 mm long, 1.2–1.3 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface hispid. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 2.5–3 mm long, membranous, 1-keeled, 5 -veined, acute. Palea of lower sterile floret 1.7–1.9 mm long. Fertile lemma oblong, 2.4–2.8 mm long, chartaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex entire or dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 1.1–2.5 mm long overall, clearly exerted from spikelet, with twisted column, persistent. Column of lemma awn 0.8–1 mm long. Palea with auriculate flaps, chartaceous, 2 -veined. Palea surface asperulous.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 0.7–0.9 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

Bhutan.


**Basionym or Replaced Name:** *Panicum decempedale* Kuntze, *Rev. Gen.* 783. (1891).

**Illustrations (Books):** H.J.Noltie, *The Grasses of Bhutan* (2000) (751, Fig. 48), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 791).

**Derivation** (Clifford & Bostock 2007): *L. decem*, ten; *pes*, foot. Culms to about 3 m tall.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial. Rootstock evident. Rhizomes elongated, scaly. Culms robust, 200–300 cm long. Culm-nodes pubescent. Lateral branches lacking. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades 80–120 cm long, 10–30 mm wide. Leaf-blade surface smooth or scabrous, glabrous or pubescent, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Peduncle scaberulous above. Panicle open, lanceolate, dense, 25–50 cm long, 7–15 cm wide, contracted about primary branches. Primary panicle branches ascending, simple, 8–20 cm long. Panicle axis scaberulous. Panicle branches scabrous, bearded in axils. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, scabrous, bearing a few hairs or glabrous, hairy at tip.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 2.5–3 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface scabrous, rough on veins. Lower glume apex acute. Upper glume lanceolate, 1.6 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate or elliptic, 2.5 mm long, chartaceous, 1-keeled, 3 -veined, obtuse. Fertile lemma lanceolate, 2 mm long, coriaceous, light brown, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, muticus or awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 2–4 mm long overall, with twisted column. Column of lemma awn 1–2 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1–1.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Embryo 0.6 length of caryopsis. Hilum punctiform.

$n = 30$ (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


Yunnan. Sikkim. Assam. West Bengal.

**Arundinella deppeana** Nees. Bonplandia, 3: 84 (1855).


**Illustrations (Books):** W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (64, Fig. 16).

**Derivation** (Clifford & Bostock 2007): in honor of Ferdinand Deppe (1794–1861) German botanist and traveller.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.
Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms erect or geniculately ascending, robust, 100–400 cm long, 3–7 mm diam. Culm-internodes thin-walled. Culm-nodes pubescent. Leaf-sheaths hispid, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.2–0.3 mm long. Leaf-blades 25–50 cm long, 8–25 mm wide. Leaf-blade surface hispid, hairy on both sides.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.8–4.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2.8–3.2 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex attenuate. Upper glume lanceolate, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume apex attenuate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.25 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.1–3.7 mm long, 0.8–0.9 length of upper glume, membranous, light brown, 1-keeled, 3(–5) -veined. Lower glume lateral veins ribbed. Lower glume surface setose, hairy on veins, with tubercle-
based hairs. Lower glume apex acuminate. Upper glume lanceolate, 3.8–4.1 mm long, 2 length of adjacent fertile lemma, 1 length of spikelet, membranous, light brown, 1-keeled, 3(-5) -veined. Upper glume lateral veins ribbed. Upper glume surface setose, hairy on veins, with tubercle-based hairs. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 3.1–3.7 mm long, membranous, 1-keeled, 3 -veined, acute. Fertile lemma lanceolate, 2–2.5 mm long, coriaceous, without keel. Lemma margins involute, interlocking with palea keels. Lemma apex entire, awned, 1 -awned. Principal lemma awn geniculate, 2.2–3 mm long overall, with twisted column. Palea coriaceous, 2 -veined.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 3.1–3.7 mm long, membranous, 1-keeled, 3 -veined, acute. Fertile lemma lanceolate, 2–2.5 mm long, coriaceous, without keel. Lemma margins involute, interlocking with palea keels. Lemma apex entire, awned, 1 -awned. Principal lemma awn geniculate, 2.2–3 mm long overall, with twisted column. Palea coriaceous, 2 -veined.

Flower and Fruit. Lodicules 2. Caryopsis with adherent pericarp.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 35–90 cm long. Leaf-sheaths 8–10 cm long, mostly shorter than adjacent culm internode, outer margin hairy. Ligule a ciliolate membrane, 1 mm long. Leaf-blades 10–20 cm long, 3–5 mm wide. Leaf-blade surface pilose. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 10–20 cm long. Primary panicle branches 1–2 -nate, 2–5 cm long. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, 1–4 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets cuneate, dorsally compressed, 4.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.


Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 4.5–5 mm long, membranous, 1-keeled, 3 -veined, obtuse. Fertile lemma ovate, 3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex awned, 1 -awned. Principal lemma awn straight, 1–1.25 mm long overall. Palea coriaceous, 2 -veined. Palea surface asperulous.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 2 mm long, purple. Stigmas 2. Caryopsis with adherent pericarp, 1.75 mm long. Hilum punctiform.

Country /Province /State. China. China South Central, China Southeast.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, J.F.Veldkamp, Poaceae ms (Flora Malesiana).


Illustrations: None found.


**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, lanceolate, 10–16 cm long, 1–1.5 cm wide. Panicle axis scabrous. Panicle branches angular, scabrous. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1 in the cluster or 2 in the cluster. Pedicels present, angular, 1–3 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse. Floret callus hairs 0.5–1 mm long.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 4–5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface scabrous, rough on veins. Lower glume apex acuminate. Upper glume ovate, 5–6 length of adjacent fertile lemma, membranous, 1-keeled, 5 -veined. Upper glume surface smooth. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 5–6 mm long, membranous, 1-keeled, 3 -veined, acuminate. Fertile lemma ovate, dorsally compressed, 3 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 3–4 mm long overall, with twisted column. Palaea with auriculate flaps, 1 length of lemma, coriaceous, 2 -veined. Palaea surface asperulous.


**Distribution (TDWG).** Continent. Tropical Asia.

**Country/Province/State.** Papuasia. New Guinea.


**Accepted by:** U. Quattrocchi, **CRC World Dictionary of Grasses** (2006).

**TYPE** from Java: Goering 138.

**Illustrations:** None found.


**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 25–125 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades 3.5–26 cm long, 4–15 mm wide, mid-green. Leaf-blade surface smooth, pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open or contracted, lanceolate, equilateral or nodding, 5–35 cm long. Panicle axis scabrous. Panicle branches angular. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1 in the cluster or 2 in the cluster. Pedicels present, angular, 0.5–6.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 2.75–3.75 mm long, 0.66 length of upper glume, membranous, purple, 1-keeled, 5 -veined.
Lower glume surface glabrous or pilose. Lower glume apex acute, muticous or mucronate. Upper glume ovate, 4.5–5.5 length of adjacent fertile lemma, membranous, purple, 1-keeled, 5 -veined. Upper glume surface glabrous or pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 2.75–3.75 mm long, membranous, 1-keeled, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 2–2.25 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex entire, awned, 1 -awned. Principal lemma awn geniculate, 4.5–7 mm long overall, with twisted column. Palea with auriculate flaps, 1 length of lemma, coriaceous, 2 -veined. Palea surface asperulous.


Country /Province /State. Malesia. Java, Sumatra, Sulawesi.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, J.F.Veldkamp, Poaceae ms (Flora Malesiana).

TYPE from Java: Goering 138.
Illustrations: None found.


Inflorescence. Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open or contracted, lanceolate, equilateral or nodding, 5–35 cm long. Panicle axis scabrous. Panicle branches angular. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1 in the cluster or 2 in the cluster. Pedicels present, angular, 0.5–6.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 2.75–3.75 mm long, 0.66 length of upper glume, membranous, purple, 1-keeled, 5 -veined. Lower glume surface glabrous or pilose. Lower glume apex acute, muticous or mucronate. Upper glume ovate, 4.5–5.5 length of adjacent fertile lemma, membranous, purple, 1-keeled, 5 -veined. Upper glume surface glabrous or pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 2.75–3.75 mm long, membranous, 1-keeled, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 2–2.25 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex entire, awned, 1 -awned. Principal lemma awn geniculate, 4.5–7 mm long overall, with twisted column. Palea with auriculate flaps, 1 length of lemma, coriaceous, 2 -veined. Palea surface asperulous.


Arundinella gracilis ms Veldk.

Accepted by: J.F.Veldkamp, Poaceae ms (Flora Malesiana).
**Illustrations:** None found.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Distribution (TDWG). Continent.** Tropical Asia.

**Country /Province /State.** Malesia. Philippines.

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**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 796).

**Derivation** (Clifford & Bostock 2007): L. grandis, large; flos, flower. Spikelets with more florets than those of related species.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 40–70 cm long, 3 -noded. Culm-internodes distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule a ciliolate membrane. Leaf-blades linear or lanceolate, 15 cm long, 7 mm wide, stiff. Leaf-blade surface smooth, glabrous, hairless except near base. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or lanceolate, 16 cm long, 2 cm wide. Primary panicle branches appressed, 1–2 -nate, 4–8 cm long. Panicle axis smooth. Panicle branches glabrous. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachillla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

**Glumes.** Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 5 -veined. Lower glume lateral veins prominent. Lower glume surface scabrous, rough on veins. Lower glume apex acuminate, mucronate. Upper glume ovate, 7 mm long, membranous, 1-keeled, 5 -veined. Upper glume lateral veins prominent. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 6 mm long, membranous, 1-keeled, 5 -veined, acute. Palea of lower sterile floret 0.75 length of lemma. Fertile lemma oblong, 3.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn geniculate, 6 mm long overall, with twisted column. Palea 1 length of lemma, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** China. China South Central. Yunnan.

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**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

veined, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1 mm long. Leaf-blades filiform, involute, 2–4 cm long, 1 mm wide. Leaf-blade surface pilose, sparsely hairy, with tubercle-based hairs.

**Inflorescence.** Inflorescence a panicle, comprising 3–17 fertile spikelets, bearing juvenile spikelets at emergence. Panicle open, oblong, 4–8 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 4 mm long, 0.75 length of upper glume, membranous, 1-keeled, 7 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate. Upper glume ovate, 5 mm long, 1 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence.Lemma of lower sterile floret similar to upper glume, ovate, 5 mm long, membranous, 1-keeled, 5 -veined, acute. Lower glume primary vein scaberulous. Lower glume apex truncate, awned, 1 -awned. Principal lemma awn geniculate, 4.5 mm long overall, with twisted column. Paleo with auriculate flaps, 3 mm long, coriaceous, 2 -veined. Paleo surface asperulous.


**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Queensland.

South East.

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**Arundinella helferi ms.** Veldk.

**Accepted by:** J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

**Illustrations:** None found.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India.

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**Basionym or Replaced Name:** *Agrostis ciliata* Thunb., *Fl. Jap.* 49 (1784).


**Derivation (Clifford & Bostock 2007):** L. hairy. Hairy in part or extensively.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial, culms solitary. Rhizomes elongated. Culms 50–120 cm long, 1.5–5 mm diam., 4–6 -noded. Culm-internodes distally glabrous or hissute. Culm-nodes glabrous or pubescent or bearded. Leaves basal and cauline. Leaf-sheaths glabrous on surface to hissute, outer margin hairy. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades 7–40 cm long, 5–13 mm wide. Leaf-blade surface glabrous to pilose, hairy on both sides. Leaf-blade apex abruptly acute to acuminate.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, lanceolate or elliptic, dense or loose, 15–50 cm long, 1.5–9 cm wide, contracted about primary branches. Primary panicle branches 2–17 cm long, bearing spikelets almost to the base. Panicle axis scabrous. Panicle branches scabrous, glabrous or pubescent. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, scabrous, glabrous.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.5–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse. Floret callus hairs 0.33–0.5 length of lemma.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3–3.7 mm long, 0.7–0.9 length of upper glume, chartaceous, 1-keeled, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 1.5 length of adjacent fertile lemma, 1 length of spikelet, chartaceous, 1-keeled, 5 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 3–3.25 mm long, membranous, 1-keeled, 3(–5) -veined, acute. Fertile lemma lanceolate or ovate, 2.5–3.2 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex entire, acuminate, muticous. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 2.2–2.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**2n = 24 (1 ref TROPICOS).**


**Basionym or Replaced Name:** Andropogon hispidus Willd., Sp. Pl. 4 : 908 (1806).


**Derivation** (Clifford & Bostock 2007): L. bearing coarse stiff hairs. Plant wholly or partly rough to the touch.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, robust, 95–185 cm long, 4–5 mm diam. Culm-internodes thin-walled. Lateral branches lacking. Leaf-sheaths pubescent. Ligule an eciliate membrane, 0.2–0.3 mm long. Leaf-blades 20–25 cm long, 9–16 mm wide. Leaf-blade surface hispid, hairy adaxially or on both sides, with tubercle-based hairs.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Peduncle glabrous. Panicle open, lanceolate, dense, 25–30 cm long, contracted about primary branches. Primary panicle branches bearing spikelets almost to the base. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.7–4.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.
**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2.2–2.9 mm long, 0.66 length of upper glume, membranous, 1-keeled, 3-veined. Lower glume lateral veins ribbed. Lower glume surface scabrous. Lower glume apex acute. Upper glume lanceolate, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 3–5-veined. Upper glume apex caudate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 1.5–2.1 mm long, membranous, 1-keeled, 3-veined, acute. Fertile lemma lanceolate, 1.5–2 mm long, coriaceous, without keel, 3-veined, 0–3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 4–6 mm long overall, with twisted column. Palea with auriculate flaps, coriaceous, 2-awned. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 0.8–0.9 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. 

\[2n = 20\] (1 ref TROPICOS).


**Basionym or Replaced Name:** *Branditia holcoides* Kunth, *Rev. Gram.* 2 : 511. t. 170 (1831).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to *Holcus* with respect to the inflorescence.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Annual. Butt sheaths pilose. Culms decumbent, 20–45 cm long. Culm-nodes bearded. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 7–15 cm long, 3–10 mm wide, flaccid. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acute or acuminate.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Peduncle glabrous or pilose above. Panicle open, lanceolate or oblong, 7–15 cm long, 1–2 cm wide, contracted about primary branches. Primary panicle branches 1–6-nate, 1–3 cm long. Panicle axis scabrous, pilose, with tubercle-based hairs. Panicle branches scabrous, pilose, bearded in axils. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic, 2–2.5 mm long, 0.66–0.75 length of upper glume, membranous, 1-keeled, 3-veined. Lower glume surface pilose, with tubercle-based hairs. Lower glume apex acuminate, awned, 1-awned. Upper glume elliptic, 3–3.5 mm long, 2 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5-veined. Upper glume surface pilose, with tubercle-based hairs. Upper glume apex caudate.

**Florets.** Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, oblong, 1.5–2 mm long, 1 length of spikelet, membranous, 1-keeled, 3-veined, acute. Fertile lemma elliptic or oblong, 1 mm long, coriaceous, without keel. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex
dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5 mm long overall, with twisted column. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 0.25–0.4 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Tropical Asia.


**Illustrations (Books):** H.J.Noltie, *The Grasses of Bhutan* (2000) (751, Fig. 48), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 790).

**Derivation (Clifford & Bostock 2007):** in honor of Joseph Dalton Hooker (1817–1911), English botanist, traveller and Garden’s Director.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.


**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Peduncle glabrous. Panicle contracted, linear, 10–15 cm long, contracted about primary branches. Primary panicle branches 1.5–2 cm long, bearing spikelets almost to the base. Panicle axis glabrous or pilose. Panicle branches scabrous, pilose. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic, 4–4.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3–5 -veined. Lower glume surface pilose, hairy on veins, with tubercle-based hairs. Lower glume apex acuminate. Upper glume elliptic, 5–6 mm long, 2–2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface pilose, hairy on veins, with tubercle-based hairs. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, oblong, 4 mm long, 1 length of spikelet, membranous, 1-keeled, 5 -veined, scabrous, rough on midvein, acute. Fertile lemma elliptic or oblong, 2.25–2.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 3–4 mm long overall, with twisted column. Column of lemma awn 1.5 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1.25–1.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**TYPE** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Ritung: *Burkill 373*; India, Mahadeo: *Clarke 155622*; India, Khasia Hills: *Clarke 16588*; India, Boga Pance: Hooker 2001.

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.


**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, lanceolate or ovate, dense, 5–13 cm long, contracted about primary branches. Panicle axis pilose. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, ciliate.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume elliptic, 3 mm long, 0.75 length of upper glume, membranous, purple, 1-keeled, 3–5 -veined. Lower glume surface smooth, glabrous. Lower glume apex acute. Upper glume elliptic, 4–4.5 mm long, 2 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface scabrous, rough on veins. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, elliptic, 4–4.5 mm long, 1 length of spikelet, membranous, 1-keeled, 5 -veined, acute. Fertile lemma elliptic or oblong, 2–3 mm long, coriaceous, pallid, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5–6 mm long overall, with twisted column. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicles 2, cuneate, fleshy. Anthers 3, 1 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.

**Country /Province /State.** China. Tibet. **Indian Subcontinent.** Assam, Eastern Himalaya, India. Arunachal Pradesh. Meghalaya.

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**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. Anhui.

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**TYPE** from Thailand. **Basionym or Replaced Name:** Nakhon Phanom: Tha Uthen, ca.200 m, 16 Feb 1924, *A.F.G.Kerr 8474* (holo, BK; iso, BM, K).

**Illustrations (Journals):** *Novon* (21: 150: Fig,1 (2011)).

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 30–120 cm long. Culm-nodes brown. Leaf-
Sheaths 9–16 cm long, glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 0.5–0.6 mm long. Leaf-blades (8–)20–50(–70) cm long, 3–8 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous, tuberculate-ciliate.

Inflorescence. Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle contracted, elliptic, 5–15 cm long, contracted about primary branches. Primary panicle branches 1.5–5 cm long. Panicle branches scabrous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 0.2–2 mm long, scabrous, setose.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, laterally compressed, 3–3.6 mm long, 1–1.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–0.3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 2.5–3 mm long, 1 length of upper glume, chartaceous, 1-keeled, 3–5 -veined. Lower glume surface hispid, hairy on veins, with tubercle-based hairs. Lower glume apex acute. Upper glume oblong or ovate, 2.5–3.5 length of adjacent fertile lemma, chartaceous, 1-keeled, 5 -veined. Upper glume surface hispid, hairy on veins, with tubercle-based hairs. Upper glume apex acuminata.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, oblong or ovate, 2.5–3 mm long, membranous, 1-keeled, 5–7 -veined, ciliate on margins, fringed above, acute. Palea of lower sterile floret 2.5–2.7 mm long. Fertile lemma oblong or ovate, 1.8–2 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, interlocking with palea keels. Lemma apex entire or dentate, 2 -fid, mucronate. Principal lemma awn 0.5–0.6 mm long overall. Palea oblong or ovate, with auriculate flaps, 1.8–2 mm long, coriaceous, 2 -veined. Palea apex acute.

Flower and Fruit. Anthers 3, 0.9–1.6 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 789).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From the Khasia Hills, India.


Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms robust, 50–105 cm long. Culm-nodes pubescent. Leaf-sheaths scaberulous, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades conduplicate or involute, 15–45 cm long, 4–6 mm wide, stiff. Leaf-blade surface scaberulous, rough on both sides, glabrous or pubescent, hairy on both sides. Leaf-blade margins scabrous.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume elliptic, 4–4.5 mm long, 0.75 length of upper glume, membranous, purple, 1-keeled, 5 -veined. Lower glume surface scabrous, rough on veins, pilose, with tubercle-based hairs. Lower glume apex acuminate. Upper glume ovate, 5.5 mm long, 1.5 length of adjacent fertile lemma, membranous, purple, 1-keeled, 5 -veined. Upper glume surface scabrous, rough on veins, pilose, with tubercle-based hairs. Upper glume apex acuminate.
**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 5.5 mm long, membranous, 1-keeled, 2 -veined, acuminate. Fertile lemma oblong, 3–4 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 5–6 mm long overall, with twisted column. Column of lemma awn 2 mm long. Lateral lemma awns present, arising on apex of lobes, 1 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1.5–2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Illustrations (Journals):** Kew Bulletin (64:: 748, Fig.1 (2009)).

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country/Province/State.** India. Assam, Meghalaya, Nagaland.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. laxus, loose; flos, flower. Inflorescence an open panicle.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Annual or perennial, short-lived. Rootstock not evident, or evident. Culms slender, 30–70 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades flat or conduplicate or convolute, 7–15 cm long, 3–7 mm wide. Leaf-blade surface smooth, glabrous or pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acuminate, filiform.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Peduncle glabrous. Panicle open, ovate, 3–6 cm long. Panicle axis smooth. Panicle branches smooth. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 12–16 mm long, smooth or scaberulous, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Flocet callosus pilose, obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, gapin. Lower glume ovate, 3 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 4.25 mm long, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface asperulous, rough on veins. Upper glume apex rostrate.

**Florets.** Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 3 mm long, membranous, 1-keeled, 3 -veined, acute. Fertile lemma oblong, 2 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, muticous or awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 4 mm long overall, with twisted column. Column of lemma awn 1 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.
**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1.25–1.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India, Sri Lanka. Maharashtra.


**Illustrations (Books):** G.G.Potgar, C.B.Salunkhe & S.R.Yadav, Grasses of Maharashtra (2012) (Fig. 206).


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 2.5–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous, obtuse.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface scabrous, rough on veins. Lower glume apex acute. Upper glume ovate, 2.5–3 mm long, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface scabrous, rough on veins. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, elliptic, 2.5–3.5 mm long, membranous, 1-keeled, 5 -veined, acute. Fertile lemma elliptic or oblong, 1 mm long, chartaceous, light brown, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex entire, obtuse, muticous. Palea with auriculate flaps, chartaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1 mm long. Stigmas 2. Caryopsis with adherent pericarp, 1 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

**Distribution (TDWG).** Continent. Tropical Asia.


**Illustrations:** None found.

Derivation (Clifford & Bostock 2007): L. *longus*, long; *spica*, a point; hence, in particular, an ear or spike of grain.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.
**Habit, Vegetative Morphology.** Perennial, caespitose, clumped loosely. Rhizomes elongated. Culms geniculately ascending, 35–90 cm long, 3 mm diam., 5 -noded. Culm-internodes distally glabrous. Culm-nodes bearded. Leaf-sheaths longer than adjacent culm internode, hispid, with tubercle-based hairs. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 24–33 cm long, 7–8 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface hispid, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, lanceolate, 30–50 cm long. Primary panicle branches ascending, whorled at most nodes, 10–20 cm long. Panicle axis scabrous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, filiform, unequal, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4.7–4.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus pilose. Spikelet callus hairs 0.5 length of spikelet.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 4.2 mm long, 0.9 length of upper glume, membranous, light brown, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume surface glabrous. Upper glume ovate, 4.2–4.8 mm long, membranous, light brown, 1-keeled, 5 -veined. Upper glume primary vein scabrous. Upper glume surface glabrous.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 4.2 mm long, membranous, 1-keeled, 5 -veined. Fertile lemma ovate, 2.4 mm long, coriaceous, without keel. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 3.5 mm long overall, with twisted column.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** China. China South Central. Yunnan.


**TYPe** from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Madras: Wallich 8663B ex Herb. Wight (K holo).


**Derivation** (Clifford & Bostock 2007): Gk mesos, middle; L. phyllon, leaf.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending or decumbent, slender, 20–45 cm long. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1 mm long. Leaf-blades 5–10 cm long, 4–6 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scaberulous, tuberculcate-ciliate. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, elliptic or ovate, 4–12 cm long, 2 cm wide, contracted about primary branches. Primary panicle branches 0.5–1.8 cm long. Panicle axis glabrous or villous. Panicle branches glabrous or villous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 4 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface pilose, with tubercle-based hairs. Lower glume apex setaceously acuminate. Upper glume lanceolate, 5.5 mm long, 2.75 length of adjacent fertile lemma, membranous, 1-keeled, 5 -veined. Upper glume surface pilose, with tubercle-based hairs. Upper glume apex entire or dentate, 2 -fid, acuminate.
**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, elliptic, 2.5 mm long, membranous, 1-keeled, 3 -veined, acute. Fertile lemma oblong, 2 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6 mm long overall, with twisted column. Column of lemma awn 3 mm long. Lateral lemma awns present, arising on apex of lobes, 2.5 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 0.5–1.75 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

\[ n = 8 \] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India.

Kerala. Tamilnadu.

**Arundinella metzii** Hochst. ex Miq. *Verh. Nederl. Inst. 3, 4: 31 (1851).*


**TYPE** from India. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: India, Mangalore: *Hohenacker 297 (K iso).*


**Derivation** (Clifford & Bostock 2007): in honor of Fr. Metz (1819–1885) who collected in India.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, slender, 10–100 cm long. Culm-internodes smooth or scaberulous. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths hispid, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane. Leaf-blades 10–40 cm long, 3–9 mm wide. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Peduncle glabrous or pilose above. Panicle open, oblong, 20–50 cm long, 10–25 cm wide, contracted about primary branches. Primary panicle branches 5–15 cm long. Panicle axis scabrous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 2–2.5 mm long, 0.5–0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume lateral veins prominent. Lower glume surface asperulous, rough on veins, glabrous or pilose, hairy between veins, with tubercle-based hairs. Lower glume margins eciliate or ciliate. Lower glume apex acute. Upper glume elliptic, 2.75–4.25 mm long, 2.5–4 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface glabrous or pilose, hairy between veins, with tubercle-based hairs. Upper glume margins eciliate or ciliate. Upper glume apex caudate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, oblong, 1.75–2.5 mm long, 1 length of spikelet, membranous, 1-keeled, 3 -veined, acute. Fertile lemma elliptic or oblong, 1 mm long, coriaceous, without keel. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 3 mm long overall, with twisted column. Column of lemma awn 1–2 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 0.6–1 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Tropical Asia.


**TYPE** from Australia, Queensland:

T: *<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Moreton Dist., Mt. Ngungun, in rock crevices, 300–700 ft one of the abundant plants on the upper part of the mountain, Blake 14143.**

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Basal innovations extravaginal. Culms 30–90 cm long, 5–13 -noded. Leaf-sheaths glabrous on surface or pilose, outer margin glabrous or hairy. Ligule a ciliolate membrane, 0.5–0.7 mm long, truncate. Leaf-blades involute, 5–19 cm long, 2–8 mm wide, stiff. Leaf-blade apex acuminata.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, linear or lanceolate, 8–23 cm long, 1–3 cm wide, contracted about primary branches. Primary panicle branches appressed, 1–7 cm long, bearing spikelets almost to the base. Panicle axis scabrous. Panicle branches secund. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 0.3–3 mm long, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4–5.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Flocet callus bearded, obtuse. Flocet callus hairs 1 mm long.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, shiny, gaping. Lower glume ovate, 3.3–4.7 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3–7 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate, awned, 1 -awned, awn 1.1 mm long. Upper glume lanceolate, 1.4–1.7 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5–7 -veined. Upper glume primary vein scaberulous. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, elliptic, 3.4–4.5 mm long, membranous, 1-keeled, 5 -veined, obtuse. Fertile lemma elliptic, 2.75–3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels, ciliolate. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, genculate, 3.8–6 mm long overall, with twisted column. Column of lemma awn 1–2 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1.7–2 mm long. Stigmas 2. Caryopsis with adherent pericarp, ellipsoid or oblong, 1.4 mm long. Hilum punctiform.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Queensland. South East.


**TYPE** from Nepal. T: *<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Nepal:, Wallich s.n. in Herb. Lindley (HT: LE; IT: K).**


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Fertilus callus bearded, obtuse. Fertilus callus hairs 0.2–0.3 length of lemma.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertilus lemma, gaping. Lower glume ovate, 3–5 mm long, 0.6–0.9 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume acet acid or acuminate or setaceously acuminate. Upper glume ovate, 1.5–2 length of adjacent fertilus lemma, membranous, 1-keeled, 5 -veined. Upper glume primary vein scabrous. Upper glume apex obtuse.

Florots. Basal sterile florots 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 1.3 length of fertilus lemma, membranous, 1-keeled, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, lanceolate in profile, 2–2.5 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 4–6 mm long overall, with twisted column. Palea lanceolate, with auriculate flaps, 1 length of lemma, coriaceous, 2 -veined. Palea surface asperulous. Palea apex dentate, 2 -fid.


n = 10 (1 ref TROPICOS).


**Basionym or Replaced Name:** Holcus nervosus Roxb., *Fl. Ind.* 1: 320 (1820).


**Derivation** (Clifford & Bostock 2007): L.* nervus*, nerve; -osa, abundance. With conspicuous nerves in the glumes or lemmas.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.


**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, elliptic or ovate, 6–25 cm long, contracted about primary branches. Panicle axis scabrous. Panicle branches scabrous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, bearing a few hairs, hairy at tip.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret calyx pubescent, obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 3.5 mm long, 0.6 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface scabrous, rough on veins, glabrous or pilose, hairy on veins. Lower glume apex setaceous acuminate. Upper glume elliptic, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface scabrous, glabrous or pilose, hairy on veins, with tubercle-based hairs. Upper glume apex caudate.

**Florets.** Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 3.5 mm long, membranous, 1-keeled, 3 -veined, obtuse. Fertile lemma oblong, 2.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 5–9 mm long overall, with twisted column. Column of lemma awn 2–4 mm long. Lateral lemma awns present, arising on apex of lobes, 2 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1.2–1.4 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** *Indian Subcontinent*. India. Meghalaya, Kerala, Karnataka, Maharashtra, Tamilnadu.


**Illustrations (Books):** S.-L. Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 789).


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 20–45 cm long, 0.8–1.2(–1.5) mm diam., 7–13 -noded. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Leaf-sheaths hirsute, with tubercle-based hairs, outer margin glabrous. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades linear, 4–6 cm long, 1 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, 4–6 cm long. Panicle branches angular, scabrous. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, 0.5–2.5 mm long, ciliate, hairy at tip.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 4.5–4.9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse. Floret callus hairs 0.7 mm long, 0.33 length of lemma.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface hispid. Lower glume apex acuminate. Upper glume lanceolate or ovate, 4.5–4.9 mm long, membranous, 1-keeled, 5 -veined. Upper glume surface hispid. Upper glume hairs white. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 3.2 mm long, membranous, 1-keeled, 5 -veined, obtuse. Palea of lower sterile floret membranous, 2 mm long. Fertile lemma lanceolate, 2 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex awned, 3 -awned. Principal lemma awn geniculate, 6 mm long overall, with twisted column. Column of lemma awn 2.5 mm long. Lateral lemma awns present, 1.5–1.7 mm long. Palea coriaceous, 2 -veined. Palea surface asperulous.


**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central. Yunnan.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Culms 100–180 cm long, 2–3 mm diam. Ligule an eciliate membrane. Leaf-blades flat or involute, 10–30 cm long, 5–10 mm wide.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, lanceolate or oblong, 20–35 cm long, contracted about primary branches. Primary panicle branches 10–20 cm long. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3.5–4 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume apex caudate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 3.5–4 mm long, membranous, 1-keeled, 3 -veined, acute. Fertile lemma lanceolate, 1.8–2.3 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 4.5–7 mm long overall, with twisted column. Column of lemma awn 1.3–2 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.


**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico.


**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 793).

**Derivation** (Clifford & Bostock 2007): *L. parvs*, small; *flos*, flower. Spikelets small or with few florets.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 2–2.5(–2.7) mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse. Floret callus hairs 0.6 mm long.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 1.9–2.7 mm long, 0.75–1 length of upper glume, membranous, purple, 1-keeled, 3–5-veined. Lower glume apex acuminate. Upper glume ovate, 2–2.5(–2.7) mm long, membranous, purple, 1-keeled, 5-veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 2.2–2.6 mm long, chartaceous, 1-keeled, 5-veined, acute, mucronate. Fertile lemma lanceolate, 1.1–1.8 mm long, coriaceous, without keel, 5-veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex awned, 1-awned. Principal lemma awn geniculate, 2.4–2.9 mm long overall, with twisted column, limb scaberulous. Column of lemma awn 0.7–1.1 mm long. Palea coriaceous, 2-veined. Palea surface asperulous.


**Distribution (TDWG).** Continent: Temperate Asia.

**Country /Province /State.** China. China South Central. Yunnan.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): *L. pilus*, a hair; *axilis*, arm-pit. Lower axils of inflorescence densely hairy.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, (150–)200–250 cm long, (2–)4–6 mm diam. Culm-internodes distally pubescent or pilose. Culm-nodes pubescent. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliolate membrane. Leaf-blades linear or lanceolate, 28–52 cm long, 8–10 mm wide. Leaf-blade surface pilose, densely hairy, hairy on both sides, with tubercle-based hairs.

**Inflorescence.** Inflorescence a panicle. Peduncle hispid above. Panicle open, oblong, 30–58 cm long, 4–5 cm wide. Primary panicle branches whorled at most nodes, 10–20 cm long. Panicle axis angular, scabrous, pilose. Panicle branches angular, scabrous, pilose. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, 1–4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse. Floret callus hairs 0.5–0.9 mm long.
**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3–3.5 mm long, 0.8–1 length of upper glume, membranous, purple, 1-keeled, 3–5(–7) -veined. Lower glume primary vein scabrous. Lower glume surface glabrous or pilose, hairy above. Lower glume apex acuminate. Upper glume ovate, 3.5–4 mm long, membranous, purple, 1-keeled, 5 -veined. Upper glume primary vein scabrous. Upper glume surface glabrous or pilose, hairy above. Upper glume apex acute.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 3–3.5 mm long, membranous, 1-keeled, 3–5 -veined, obscurely veined, acute. Fertile lemma lanceolate, 1.9–2.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 3.2–3.5 mm long overall, with twisted column. Column of lemma awn 1–1.3 mm long. Palea coriaceous, 2 -veined. Palea surface asperulous.


**Distribution (TDWG).** Continent. Temperate Asia.


**Derivation (Clifford & Bostock 2007):** *L. pubesco*, become hairy. Plant whole or in part hairy.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms slender, 20–35 cm long, 0.8–1 mm diam., 4–6 -noded. Culm-internodes distally hirsute. Culm-nodes pubescent. Leaves mostly basal. Leaf-sheaths 2–6 cm long, hirsute. Ligule a ciliolate membrane. Leaf-blades 3–10 cm long, 4–6 mm wide, stiff. Leaf-blade surface hirsute, hairy on both sides. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, lanceolate or oblong, 12–25 cm long, 1.5–3 cm wide. Primary panicle branches 1.5–4 cm long. Panicle axis glabrous or pubescent. Panicle branches scabrous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, recurved at apex. Lower glume lanceolate or ovate, 2.3–2.5 mm long, 0.66 length of upper glume, chartaceous, 1-keeled, 5 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume lanceolate or ovate, 2.5 length of adjacent fertile lemma, 1 length of spikelet, chartaceous, 1-keeled, 5 -veined. Upper glume apex caudate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate or ovate, 3 mm long, chartaceous, 1-keeled, 3 -veined, acute. Fertile lemma lanceolate, 2–2.2 mm long, chartaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 4.5–5 mm long overall, with twisted column. Palea with auriculate flaps, chartaceous, 2 -veined. Palea surface asperulous.


**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.

**Arundinella pulchra** ms Veldk. Fm ms.

**Accepted by:** J.F. Veldkamp, Poaceae ms (*Flora Malesiana*).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. beautiful. Attractive in appearance, usually the inflorescence.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Distribution (TDWG).** Continent. Tropical Asia.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 7–50 cm long, 1–3 -noded. Culm-nodes pubescent. Leaf-sheaths outer margin hairy. Ligule an eciliate membrane. Leaf-blades lanceolate, 3–15 cm long, 6–18 mm wide, flaccid. Leaf-blade surface glabrous or pilose, sparsely hairy.

**Inflorescence.** Inflorescence a panicle. Panicle open, obovate, effuse, 5–25 cm long, 2–18 cm wide. Primary panicle branches profusely divided. Panicle branches capillary, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1.5–8 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 1.5–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret calyx pubescent, obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 1–1.5 mm long, 0.5–0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 1.5–2.5 mm long, 1.5–2.5 length of adjacent fertile lemma, membranous, 1-keeled, 3–5 -veined. Upper glume surface glabrous or pilose. Upper glume apex acute or acuminate.

**Florets.** Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper ovate, 1.3 length of fertile lemma, membranous, 1-keeled, 3 -veined, truncate or obtuse. Fertile lemma ovate, 1 mm long, coriaceous, without keel, 1 -veined, more than 3-veined, one-veined. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 2–3 mm long overall, with twisted column. Column of lemma awn 1–1.5 mm long. Palea with auriculate flaps, 1 length of lemma, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Anthers 3, 0.3 mm long. Caryopsis with adherent pericarp, 1 mm long.

\[ n = 12 \] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia, Tropical Asia.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.5–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous, obtuse.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume orbicular, 2.5–3 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface scabrous, rough on veins, glabrous. Lower glume apex acute. Upper glume elliptic, 3.5–4 mm long, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface scabrous, rough on veins. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, oblong, 3–3.5 mm long, 1 length of spikelet, membranous, 1-keeled, 3 -veined, acute. Fertile lemma elliptic or oblong, 1.5 mm long, coriaceous, pallid, without keel. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 3 mm long overall, with twisted column. Column of lemma awn 1 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous, pubescent, hairy on back, hairy above.

Flower and Fruit. Lodicles 2, cuneate, fleshy. Anthers 3, 0.75–1.25 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

\( n = 10 \) (1 ref TROPICOS), or 20 (1 ref TROPICOS). 2\( n = 20 \) (1 ref TROPICOS).


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 1.5–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.


Florets. Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 1–1.25 mm long, chartaceous, 1-keeled, 3 -veined, scaberulous, dentate, 2 -fid, mucronate. Palea of lower sterile floret 0.75 mm long. Fertile lemma lanceolate, 1.8 mm long, coriaceous, without keel. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, setaceously acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 2.5 mm long overall, with twisted column. Column of lemma awn 1 mm long. Palea with auriculate flaps, 1 mm long, coriaceous, 2 -veined.

Flower and Fruit. Anthers 3, 0.25 mm long.


TYPE from China. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: China: Cavalerie & Fortunat 2034; Indochina, Tonkin: Balansa 1694; Indochina, Tonkin: Balansa 4901:.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. rupestris, rupestris, place of growth; Growing amongst rocks.


Inflorescence. Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, linear or lanceolate, 3–15 cm long, 1.5–2 cm wide, contracted about primary branches. Primary panicle branches bearing spikelets almost to the base. Panicle axis scabrous. Panicle branches scabrous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 0.8–4 mm long, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 3.5 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 5 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate. Upper glume ovate, 1.8 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 3.5–4 mm long, membranous, 1-keeled, 3 -veined, obtuse. Fertile lemma oblanceolate, 2–2.2 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 2–3 mm long overall, with twisted column. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.


Derivation (Clifford & Bostock 2007): L. seta, bristle; -osa, abundance. Glumes and/or lemmas awned or attenuated.


Inflorescence. Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, oblong or ovate, nodding. 5–30 cm long, contracted about primary branches. Primary panicle branches 1–15 cm long. Panicle axis smooth or scabrous. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present, scabrous, bearing a few hairs, hairy at tip.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume elliptic, 3.5–5 mm long, 0.6–0.7 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface scabrous, rough on veins. Lower glume apex acuminate, awned, 1 -awned. Upper glume elliptic, 5.5–7 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 5 -veined. Upper glume surface scabrous, rough on veins. Upper glume apex caudate.

Florets. Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, elliptic, 3–4.5 mm long, membranous, 1-keeled, 5 -veined, obtuse. Fertile lemma lanceolate, 2.5–3 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 5–9.5 mm long overall, with twisted column. Column of lemma awn 3.5 mm long. Lateral lemma awns present, arising on apex of lobes, 2–3.5 mm long. Palea with auriculate flaps, coriaceous, 2 -awned. Palea surface asperulous.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 1.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Embryo 0.6 length of caryopsis. Hilum punctiform.

n = 16 (1 ref TROPICOS), or 20 (1 ref TROPICOS). 2n = 32 (1 ref TROPICOS).

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia, Australasia.


T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: India, Mahableshwur Hills: Coll?.

**Illustrations (Books):** G.G.Potgar, C.B.Salunkhe & S.R.Yadav, Grasses of Maharashtra (2012) (Fig. 212).


**Derivation** (Clifford & Bostock 2007): L. spica, thorn; -ata, possessing; Inflorescence a spike or spicate panicle.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending or decumbent, slender, 15–30 cm long, rooting from lower nodes. Leaf-sheaths pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliolate membrane. Leaf-blades lanceolate, 2–4 cm long, 3–6 mm wide. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acute.

**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Peduncle antrorsely scabrous above. Panicle spiciform, linear, 2–5 cm long, 0.75–1 cm wide. Panicle axis pubescent. Spikelets solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 5.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus obtuse.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma, gaping.

- Lower glume lanceolate, 2–3 mm long, 0.5 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface pilose, with tubercle-based hairs. Lower glume apex acuminate, awned, 1 -awned. Upper glume lanceolate, 5.5–6 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume surface scabrous, glabrous or pilose. Upper glume apex ciliate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 2.5 mm long, membranous, 1-keeled, 5 -veined, acute. Fertile lemma oblong, 1 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5–6 mm long overall, with twisted column. Column of lemma awn 3 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicles 2, cuneate, fleshy. Anthers 3, 0.25 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

Maharashtra.


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online.

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): In honor of B. S. Sun, Chinese agrostologist.
**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Perennial. Culms 85 cm long, 3 mm diam. Culm-nodes pubescent. Leaf-sheaths smooth, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 22 cm long, 2.5–3.5 mm wide. Leaf-blade surface scabrous, glabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, lanceolate, 10 cm long. 2.5 cm wide. Primary panicle branches 3.5 cm long. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present, unequal, 0.5–3 mm long, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6.8–7.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus obtuse.

**Glumes.** Glumes persistent, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 6 mm long, 0.8 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface setose, with tubercle-based hairs. Lower glume apex acuminate. Upper glume lanceolate, 7.3 mm long, membranous, 1-keeled, 5 -veined. Upper glume surface setose, with tubercle-based hairs. Upper glume apex acuminate.

**Florets.** Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, elliptic, 6.5 mm long, membranous, 1-keeled, 3 -veined, obtuse. Fertile lemma elliptic or oblong, 3.8 mm long, coriaceous, without keel. Lemma surface pubescent, hairy above. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6–6.3 mm long overall, with twisted column. Column of lemma awn 2 mm long. Lateral lemma awns present, arising on apex of lobes, 0.7–0.9 mm long. Palea with auriculate flaps, coriaceous, 2 -veined.

**Flower and Fruit.** Anthers 3, 2.5–2.7 mm long.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central. Yunnan.

**Arundinella tenggarae ms** Veldk. Fm ms.

Accepted by: J.F.Veldkamp, Poaceae ms (Flora Malesiana).

TYPE from Indonesia.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): named after the province Nusa Tenggara, where it occurs.

**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Distribution (TDWG).** Continent. Tropical Asia.

**Country /Province /State.** Malesia. Lesser Sunda Is.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).


Illustrations: None found.


**Classification.** Subfamily Panicoideae. Tribe: Saccharaeae. Subtribe Arundinellinae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 43–70 cm long. Culm-nodes glabrous or pubescent. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades 10–20 cm long, 3–6 mm wide, stiff. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins glabrous or tuberculate-ciliate. Leaf-blade apex acuminate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachill extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, 3.25–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous, obtuse.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume orbicular, 2 mm long, 0.66 length of upper glume, membranous, purple, 1-keeled, 3 -veined. Lower glume surface asperulous, rough on veins. Lower glume apex obtuse. Upper glume elliptic or orbicular, 3 mm long, 1.3 length of adjacent fertile lemma, 1 length of spikelet, membranous, purple, 1-keeled, 5 -veined. Upper glume surface asperulous, rough on veins. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence.Lemma of lower sterile floret similar to upper glume, ovate, 3 mm long, membranous, 1-keeled, 3 -veined, acute. Fertile lemma elliptic or oblong, 2.25 mm long, coriaceous, pallid, without keel, 3 -veined, 0–3 -veined. Lower glume apex acuminate. Lower glume surface scabrous. Lower glume margins involute, interlocking with palea keels. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 2.7–2.9 mm long overall, with twisted column. Column of lemma awn 0.9 mm long. Palea coriaceous, 2 -veined. Palea surface scabrous.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. thrix, hair; lepis, scale. Glumes or lemmas hairy.


Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes short, scaly. Culms erect, 115–120 cm long, 2–3 mm diam., 5–6 -noded, without nodal roots or rooting from lower nodes. Culm-internodes distally glabrous. Culm-nodes pubescent. Leaf-sheaths hispid, with tubercle-based hairs, outer margin hairy. Ligule a ciliolate membrane, scarios, truncate. Leaf-blades linear or lanceolate, 20–40 cm long, 8–15 mm wide, herbaceous or coriaceous. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachill extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 3.9–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse. Floret callus hairs 0.5 mm long.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 2.5–3.2 mm long, 0.75 length of upper glume, membranous, 1-keeled, 5 -veined. Lower glume primary vein scabrous. Lower glume surface pilose, with tubercle-based hairs. Lower glume apex acuminate. Upper glume ovate, 3.9–4 mm long, membranous, 1-keeled, 5–7 -veined. Upper glume primary vein scabrous. Upper glume surface pilose, with tubercle-based hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 2.5–3.2 mm long, chartaceous, 1-keeled, 5 -veined, acute. Palea of lower sterile floret 2.2 mm long. Fertile lemma ovate, 2–2.2 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scabrous. Lemma margins involute, interlocking with palea keels. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 2.7–2.9 mm long overall, with twisted column. Column of lemma awn 0.9 mm long. Palea coriaceous, 2 -veined. Palea surface scabrous.
**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1.3 mm long, purple. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG). Continent.** Temperate Asia.

**Country /Province /State.** China. China South Central. Yunnan.

**Arundinella tuberculata** Munro ex Lisboa. Bombay Grasses, 29 (1891).


**Illustrations (Books):** G.G.Potgar, C.B.Salunkhe & S.R.Yadav, Grasses of Maharashtra (2012) (Fig.213).


**Derivation** (Clifford & Bostock 2007): L. *tuberculus*, wart; -*ata*, possessing. Lemmas or glumes bearing wart-like projections.

**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.


**Inflorescence.** Inflorescence a panicle, bearing juvenile spikelets at emergence. Panicle open, linear or lanceolate, dense or loose, 7–14 cm long, 1–3 cm wide. Panicle axis scabrous. Panicle branches scabrous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 8–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 5 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface scabrous, rough on veins, pilose, hairy on veins, with tubercle-based hairs. Lower glume apex setaceously acuminate. Upper glume lanceolate, 3–3.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume surface pilose, hairy on veins, with tubercle-based hairs. Upper glume apex ciliolate.

**Florets.** Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 4.5 mm long, membranous, 1-keeled, 3 -veined, acute. Fertile lemma elliptic or oblong, 2.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 9 mm long overall, with twisted column. Column of lemma awn 4.5 mm long. Lateral lemma awns present, arising on apex of lobes, 1 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 2–3 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG). Continent.** Tropical Asia.

**Country /Province /State.** Indian Subcontinent. India. Madhya Pradesh, Maharashtra.


* T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Based on A. villosa var. heynei.


**Classification.** Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Arundinellinae.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6.5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic, 6–6.5 mm long, 0.9–1 length of upper glume, membranous, 1-keeled, 5-veined. Lower glume surface pilose, hairy on veins, with tubercle-based hairs. Lower glume apex acute, awned, 1-awned. Upper glume elliptic, 6.5–7 mm long, 2 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5-veined. Upper glume surface pilose, hairy on veins, with tubercle-based hairs. Upper glume apex caudate.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, elliptic, 6 mm long, 1 length of spikelet, membranous, 1-keeled, 5-veined, scabrous, rough at apex or on midvein, acute. Fertile lemma elliptic or oblong, 3.5 mm long, coriaceous, without keel, 5-veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 5.5 mm long overall, with twisted column. Column of lemma awn 3 mm long. Palea with auriculate flaps, coriaceous, 2-veined. Palea surface asperulous.


Country /Province /State. Indian Subcontinent. India.
Kerala. Tamilnadu.

Arundinella vietnamensis ms Veldk. FM ms.

Accepted by: J.F.Veldkamp, Poaceae ms (Flora Malesiana).

Illustrations: None found.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. villosa, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.


Habit, Vegetative Morphology. Perennial. Rootstock evident. Butt sheaths woolly. Culms 30–60 cm long. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades flat or involute or convolute, 20–45 cm long, 2–5 mm wide. Leaf-blade surface glabrous or pilose, with tubercle-based hairs. Leaf-blade apex acuminate, filiform.
Inflorescence. Inflorescence a panicle, bearing juvenile spikelets at emergence. Peduncle glabrous or pubescent above. Pedicile contracted, linear, 2–18 cm long, contracted about primary branches. Primary peduncle branches 1–2.5 cm long. Panicle axis scabrous, pubescent. Panicle branches pilose. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachillae extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 5–6 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 3–5 -veined. Lower glume surface pilose, with tubercle-based hairs. Lower glume hairs 2.5 mm long. Lower glume apex acuminate. Upper glume elliptic, 2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, 1-keeled, 5–7 -veined. Upper glume surface pilose, with tubercle-based hairs. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, elliptic, 5 mm long, membranous, 1-keeled, 5 -veined, acute. Fertile lemma oblanceolate, 2.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6 mm long overall, with twisted column. Column of lemma awn 2.5 mm long. Palea with auriculate flaps, coriaceous, 2 -veined. Palea surface asperulous.


Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 794).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Yunnan Province, China.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachillae extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, obtuse. Floret callus hairs 0.5 length of lemma.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2.5–3.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 3–5 -veined. Lower glume primary vein smooth or scabrous. Lower glume apex acuminate. Upper glume ovate, 3.5–4 mm long, membranous, glaucous or purple, 1-keeled, 5 -veined. Upper glume primary vein smooth or scabrous. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, ovate, 3.5–4 mm long, membranous, glaucous or purple, 1-keeled, 5 -veined, obtuse. Fertile lemma lanceolate, 2.5–3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface asperulous. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 4 mm long overall, with twisted column. Palea length of lemma, coriaceous, 2 -veined. Palea surface asperulous.
**Flower and Fruit.** Lodicules 2, cuneate, fleshy. Anthers 3, 1–2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

**Distribution (TDWG).** Continent. Temperate Asia.

**Country /Province /State.** China. China South Central, Tibet. Yunnan.


**Illustrations:** None found.


**Fertile Spikelets.** Spikelets comprising 1–2 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, hairy in a ring above, obtuse.


**Florets.** Fertile lemma lanceolate, 6–12 mm long, membranous, without keel, 5–9 -veined, more than 3-veined. Lemma hairs 5–8 mm long. Lemma apex acute or acuminate, muticous or mucronate. Palea 0.5–0.7 length of lemma, 2 -veined. Palea keels ciliolate.

**Flower and Fruit.** Lodicules 2. Anthers 3, 2.5–3 mm long. Ovary glabrous. Caryopsis with adherent pericarp, ovoid, 2 mm long of caryopsis. Hilum punctiform.

**Distribution (TDWG).** Continent. Europe.

**Region.** Southwestern Europe.

**Country /Province /State.** : France.

**Arundo donax** L. Sp. Pl. 81 (1753).


**TYPE** from Spain & France.


Illustrations (Journals): Ruizia (13:220, Fig 24h-j (1993)).


Derivation (Clifford & Bostock 2007): Gk *donax*, a type of reed in Classical literature, so called because the inflorescences move to and fro in the slightest breeze (Gk *doneo*, shake) and so the diaspores are easily dispersed by the wind.

Classification. Subfamily Arundinoideae. Tribe: Arundineae.


Fertile Spikelets. Spikelets comprising 2–7 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose, obtuse.


Florets. Fertile lemma lanceolate, 6–12 mm long, membranous, without keel, 5–9 -veined, more than 3-veined. Lemma surface villous, hairy below. Lemma hairs 5–8 mm long. Lemma apex acute or acuminate, muticous or mucronate. Palea 0.5–0.7 length of lemma, 2 -veined. Palea keels ciliolate.

Flower and Fruit. Lodicules 2. Anthers 3, 2.5–3 mm long. Ovary glabrous. Caryopsis with adherent pericarp, ovoid, 2 mm long. Embryo 1 length of caryopsis. Hilum punctiform.


Region. Northern Europe (*). Southwestern Europe, Southeastern Europe, Eastern Europe.


**Type** from Taiwan. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Taiwan, Shinhikchu: Makino .


**Images:** R.Darke, *The Encyclopaedia of Grasses for Liveable Landscapes* (2007):

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating location. From Formosa, now Taiwan.

**Classification.** Subfamily Arundinoideae. Tribe: Arundineae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes short. Culms erect or geniculately ascending, reed-like, 50–150 cm long, 2–6 mm diam. Culm-internodes thin-walled. Lateral branches ample. Leaves cauline. Leaf-sheaths longer than adjacent culm internode. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades lanceolate, 10–25 cm long, 5–15 mm wide. Leaf-blade surface smooth. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, lanceolate or elliptic, dense, 10–30 cm long, 3–10 cm wide. Primary panicle branches 2-nate, profusely divided, 5–8 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–2 mm long.
**Fertile Spikelets.** Spikelets comprising 2–5 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or elliptic, laterally compressed, 6–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–0.7 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume lanceolate, 4–7 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 4–9 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 4–6 mm long, membranous, without keel, 5–7 -veined, more than 3-veined. Lemma surface villous, hairy below. Lemma hairs 3 mm long. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, 2–4.5 mm long overall. Palea 3–4 mm long, 0.6–0.8 length of lemma, 2 -veined.

**Distribution (TDWG).** Continent. Temperate Asia, Tropical Asia.


**Arundo micrantha** Lam. Tableau Encyclopédique et Methodique ... Botanique 1: 196 (1791).

**TYPE** from Africa. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: D. Desfontaines s.n.; no date; Africa (P; IT: US-78865 (fragm. ex P)).

**Illustrations:** None found.


**Fertile Spikelets.** Spikelets comprising 1–2 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, hairy in a ring above, obtuse.


**Florets.** Fertile lemma lanceolate, 6–12 mm long, membranous, without keel, 5–9 -veined, more than 3-veined. Lemma surface villous, hairy below. Lemma hairs 5–8 mm long. Lemma apex acute or acuminate, muticous or mucronate. Palea 0.5–0.7 length of lemma, 2 -veined. Palea keels ciliolate.

**Flower and Fruit.** Lodicules 2. Anthers 3, 2.5–3 mm long. Ovary glabrous. Caryopsis with adherent pericarp, ovoid, 2 mm long. Embryo 1 length of caryopsis. Hilum punctiform.

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Northern Africa. Algeria.

**Arundo plinii** Turra. Farset. 11 (1765).


**TYPE** from Italy. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Italy: Coll?.


**Derivation** (Clifford & Bostock 2007): in honor of Gaius Plinius Secundus (23–79 PE) Roman Admiral and Natural Historian.
**Classification.** Subfamily Arundinoideae. Tribe: Arundineae.


**Fertile Spikelets.** Spikelets comprising 2 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, glabrous, obtuse.

**Glumes.** Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume lanceolate, 7–9 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–9 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 7–9 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface villous, hairy below. Lemma hairs 4 mm long. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, 1.5–2.5 mm long overall. Palea 0.5–0.7 length of lemma, 2 -veined.


**Type** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Brazil, Aripuana R.: *Calderon, Monteiro & Guedes* 2706 (INPA holo, CANB, K).

**Illustrations (Journals):** *Ann. Missouri Bot. Gard.* (74: 483, Fig.7 (1987)).

**Derivation** (Clifford & Bostock 2007): L. different. Male and female inflorescences and spikelets dissimilar.

**Classification.** Subfamily Arundinoideae. Tribe: Arundineae. Tribe: Chasmanthieae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Butt sheaths absent. Culms erect, 200–300 cm long, firm or woody, with aerial roots from the nodes (lower part). Culm-internodes abbreviated and closely packed at the base, solid (lower part). Lateral branches sparse. Culm-sheaths absent. Leaves basal and cauline, spiral. Leaf-sheaths longer than adjacent culm internode (densely), glabrous on surface. Ligule a ciliate membrane, 0.9–2.1 mm long. Leaf-blades 45–80 cm long, 8–16 mm wide. Leaf-blade midrib indistinct. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex hooded. Monoecious, with male and female spikelets in the same inflorescence.

**Inflorescence.** Synflorescence compound, paniculate.

Inflorescence comprising only a few spikelets, comprising 7–20 fertile spikelets, terminal and axillary, subtended by a spatheole. Sexes segregated, with male above. Spikelets clustered at each node. Fertile spikelets sessile and pedicelled. Male spikelets sessile and pedicelled. Pedicels absent or present, 0.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, curved (slightly), dorsally compressed, 7–19 mm long, falling entire.

**Glumes.** Glumes dissimilar, shorter than spikelet. Lower glume ovate, 1.5–2 mm long, 0.6–0.7 length of upper glume, herbaceous, 1-keeled, 1–3 -veined. Lower glume apex acute. Upper glume ovate, 2.2–3.5
mm long, 0.4 length of adjacent fertile lemma, herbaceous, without keels, 3–5 -veined. Upper glume lateral veins without cross-veins or with cross-veins. Upper glume apex obtuse or acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 3–5.1 mm long, 0.3–0.4 length of spikelet, herbaceous, 7–9 -veined, acute. Fertile florets female. Fertile lemma ovate, 5.7–8 mm long, herbaceous, keeled, 9–11 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma surface pilose, hairy below (at base). Lemma hairs 1–1.5 mm long. Lemma apex acute. Palea lanceolate, tightly convolute around flower, falcate, 1.3–2.1 length of lemma, spongy (lower part), 9–13 -veined. Palea keels approximate (resulting in a shallow groove). Apical sterile florets distinct from fertile, 1 in number, barren, linear to lanceolate, 0.1–4 mm long.

**Flower and Fruit.** Lodicules absent. Anthers 2, 2.2–2.9 mm long. Filaments free. Stigmas 2. Caryopsis fusiform, 6–7 mm long. Embryo 0.3–0.4 length of caryopsis. Hilum elliptic.

Male spikelets distinct from female, 3–9 flowered, without rachilla extension or with rudimentary apical florets, elliptic or oblong, 3.5–7.5 mm long. Male spikelet glumes 2. Male spikelet lemma 3–9 -veined.


**Arundoclaytonia jauensis** Davidse & Vincent. *Novon.*

Illustrations: None found.


**Distribution (TDWG).** Continent. South America.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

**TYPE** from Java. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Java, Pidjungan: *Junghuhn*.

Illustrations: None found.


**Habit, Vegetative Morphology.** Annual. Culms prostrate, 10–90 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades 3–15 cm long, 2–10 mm wide, flaccid.

**Inflorescence.** Inflorescence a panicle with branches tipped by a raceme. Panicle open, oblong, 4–7 cm long. Primary panicle branches spreading. Panicle branches capillary, terete. Racemes bearing a triad of spikelets. Rhachis obsolete. Raceme-bases filiform, pubescent, hairy at tip. Spikelets in threes. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 2 in the cluster. Pedicels present, oblong, flattened, 0.3 mm long, 0.15 length of fertile spikelet, plumose.

**Sterile Spikelets.** Companion sterile spikelets represented by barren pedicels.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 2 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse. Spikelet callus hairs 0.5 length of spikelet.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma oblong, 1 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, incised 0.4 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6–8 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

**Flower and Fruit.** Lodicules absent. Anthers 2.


**Derivation** (Clifford & Bostock 2007): Gk. -oides, similar to. Resembling Elymus with respect to the inflorescence.

**Classification:** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Habit, Vegetative Morphology**. Perennial, caespitose. Butt sheaths glabrous. Culms erect or geniculately ascending, 80–120 cm long, 4–5 -noded. Leaf-sheaths keeled. Ligule a fringe of hairs. Leaf-blades 12–35 cm long, 3–5 mm wide, glaucous. Leaf-blade surface ribbed. Leaf-blade margins scaberulous. Leaf-blade apex filiform.

**Inflorescence**. Inflorescence composed of racemes. Racemes 1, single, straight or arcuate, unilateral, 12–35 cm long, 2–3 mm wide. Rhachis flattened, 1–1.5 mm wide. Spikelet packing broadside to rhachis, lax, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

**Fertile Spikelets**. Spikelets comprising 1–2 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, suberete, 10–20 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes 2–4 mm long. Floret callus pubescent.

**Glumes**. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume linear or lanceolate, 5–12 mm long, 0.5–0.7 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 11–17 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 7–11 -veined. Upper glume apex acuminate.

**Florets**. Fertile lemma lanceolate, 10–15 mm long, coriaceous, much thinner above, without keel, 3 -veined (in the body), 0–3 -veined. Lemma lateral veins augmented by subsidaries in lobes. Lemma surface pubescent, hairy at base. Lemma apex lobed, 3 -fid, with simple equal lobes, with linear lobes, incised 0.25–0.8 of lemma length, awned, 1 -awned. Principal lemma awn 6–12 mm long overall. Palea 8 mm long. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit**. Lodicles 2, cuneate, fleshy, truncate. Anthers 3. Caryopsis with adherent pericarp, oblong, 4–6 mm long.

**Distribution (TDWG). Continent**. Australasia.

**Country /Province /State. Australia**. New South Wales, Northern Territory, Queensland, Western Australia.

Eremean. Victoria R & Barkly Tableland, Central Australia. North, Central, South East, Inland. Western Slopes, Western Plains.


Images: D.Sharp & B.K.Simon, AusGrass. Grasses of Australia. CD-Rom Version 1.0. (2002); K.Domin, Bibliotheca Botanica 85 (1915) (373, Fig.86; 374, Fig.87 as A. triticoides).

Derivation (Clifford & Bostock 2007): L. lappa, burr; -acea, indicating resemblance. Lemmas shortly awned and overlapping.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Culms erect or decumbent, 30–80 cm long. Ligule a fringe of hairs. Leaf-blades 10–20 cm long, 4–5 mm wide, glaucous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, straight or arcuate, unilateral, 5–30 cm long. Rhachis flattened. Spikelet packing broadside to rhachis, lax, 1 their length apart, regular, 2-rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–13 mm long, breaking up at maturity, disarticulating above glumes but not between florets.


Florets. Fertile lemma oblong, 6–10 mm long, coriaceous, much thinner above, without keel, 3 -veined (in the body), 0–3 -veined. Lemma lateral veins augmented by subsidiaries in lobes. Lemma surface pubescent. Lemma apex lobed, 3 -fid, with outer lobes longer, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn 4–14 mm long overall. Palea keels pubescent. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 2 mm long.


Region. Northern Europe (*).


Astrebla pectinata (Lindl.) F. Muell. ex Benth. Fl. Austral. 7: 602. (1878).


Derivation (Clifford & Bostock 2007): L. pecten, comb; -ata, possessing. Inflorescence with spikes or racemes bearing a fanciful resemblance to a comb.
**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

25 cm long, 3–6 mm wide, glaucous. Leaf-blade surface ribbed. Leaf-blade margins scaberulous. Leaf-
blade apex filiform.

**Inflorescence.** Inflorescence composed of racemes, embraced at base by subtending leaf. Racemes 1,
single, unilateral, 4–13 cm long, 10–20 mm wide. Rhachis flattened, puberulous on surface. Spikelet
packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets
pedicelled. Pedicels present, oblong.

**Fertile Spikelets.** Spikelets comprising 2–4 fertile florets, with diminished florets at the apex.
Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the
upper sterile. Spikelets oblong, laterally compressed, 10–17 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes 0.5 mm long. Floret callus pilose.

**Glumes.** Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume
lanceolate or ovate, 7–14 mm long, 0.9–1 length of upper glume, chartaceous, much thinner on margins, 1-
keeled, 5–9 -veined. Lower glume apex acuminate. Upper glume lanceolate or ovate, 8–13 mm long, 0.66–
0.75 length of adjacent fertile lemma, chartaceous, with membranous margins, without keels, 7–16 -veined.
Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, 12–17 mm long, coriaceous, much thinner above, without keel, 3 -veined (in the body), 0–3 -veined. Lemma lateral veins augmented by subsidiaries in lobes. Lemma surface vil lous, hairy below. Lemma apex lobed, 3 -fid, with outer lobes longer, with lanceolate lobes, incised 0.5–
0.7 of lemma length, awned, 1 -awned. Principal lemma awn 6 mm long overall. Palea 4–6 mm long. Palea
keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy, truncate. Anthers 3. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent Australasia.

**Country /Province /State.** Australia. New South Wales, Northern Territory, Queensland, South
Australia, Western Australia.

Kimberley, Eremean. Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern.
North, Central, South East, Inland. Tablelands, Western Slopes, Western Plains.


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World

**TYPE** from Australia, Queensland. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy
Database: Australia: Queensland: Longreach, Apr 1913, *Bick s.n.*

(341, Fig. 273), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (203, Pl 60),
J.R.Wheeler et al, *Flora of the Kimberley Region* (1992) (1129, Fig. 325), S.W.L.Jacobs, R.D.B.Whalley &

**Illustrations (Journals):** *Hooker's Icones Plantarum* (t.3142 (1933)).


**Derivation** (Clifford & Bostock 2007): L. spreading at right angles from a common axis. Inflorescence
arms held at right angles to common axis.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 15–30 cm long, 3–6 mm wide. Leaf-blade surface
scabrous, rough adaxially. Leaf-blade margins scaberulous. Leaf-blade apex filiform.

**Inflorescence.** Inflorescence composed of racemes, embraced at base by subtending leaf. Racemes 1,
single, unilateral, 7–18 cm long. Rhachis flattened, scabrous on surface. Spikelet packing broadside to
rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 1.5–2.5
mm long, scaberulous.
**Fertile Spikelets.** Spikelets comprising 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 8–11 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

**Glumes.** Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5–10 mm long, 0.8–0.9 length of upper glume, chartaceous, 1-keeled, 1–5 -veined. Lower glume apex acuminate, mucronate. Upper glume elliptic, 6–11 mm long, 1 length of adjacent fertile lemma, chartaceous, without keels, 9–11 -veined. Upper glume apex acuminate, mucronate.

**Florets.** Fertile lemma oblong, 9–12 mm long, coriaceous, much thinner above, without keel, 3 -veined (in the body), 0–3 -veined. Lemma lateral veins augmented by subsidiaries in lobes. Lemma surface villous, hairy below. Lemma apex lobed, 3 -fid, with outer lobes longer, incised 0.4–0.5 of lemma length, awned, 3 -awned. Principal lemma awn hooked, 5 mm long overall. Lateral lemma awns present, 3–4 mm long, shorter than principal. Palea 0.6–0.7 length of lemma. Palea keels ciliate. Palea apex lobed, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicles 2, cuneate, fleshy, truncate. Anthers 3, 2 mm long. Caryopsis with adherent pericarp, ellipsoid, dorsally compressed, 2.5–3 mm long.

**Distribution (TDWG).** Continent: Australasia. Country /Province /State: Australia. New South Wales, Northern Territory, Queensland, South Australia, Western Australia.

Kimberley, Darwin & Gulf, Victoria R & Barkly Tableland. NW & Lake Eyre. North, Central, South East. Western Plains.


**TYPE** from Brazil. Basionym or Replaced Name: *Merochlas capitata* Hook., *Icon. Pl.* 3: t. 273, 274 (1840)


**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (20, Fig. 4), E.J.Judziewicz et al, *American Bamboos* (1999) (161, Fig. 72).

**Illustrations (Journals):** Smithsonian Contributions to Botany (9: 47, Fig. 19; 49, Fig. 20; (1973)).

**Derivation** (Clifford & Bostock 2007): L. caput, head; -ata, possessing. Inflorescence condensed to a sphere-like structure.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Synflorescence bractiferous, globose, with glumaceous subtending bracts, bracts 5 mm long, without axillary buds at base of spikelet. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 13–16 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 4–5 mm long, 1 length of upper glume, chartaceous, without keels, 7 -veined. Lower glume apex acute, awned, 1 -awned, awn 2–5 mm long. Upper glume ovate, 4–5 mm long, 0.3–0.4 length of adjacent fertile lemma, chartaceous, without keels, 7 -veined. Upper glume apex acute, awned, 1 -awned, awn 2–5 mm long.
**Florets.** Fertile lemma ovate, 13–16 mm long, coriaceous, keeled, 7 -veined, more than 3-veined. Lemma surface pubescent, hairy above. Lemma hairs red. Lemma apex acuminate. Palea 1 length of lemma. Palea keels ciliate. Apical sterile florets 1 in number, barren, lanceolate, 10 mm long.


**Distribution (TDWG).** Continent. South America.


**Illustrations (Books):** J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (41, Fig. 21).

**Illustrations (Journals):** *Novon* (1:79, Fig.2 (1991)).

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to. From Amazonas Province, Brazil.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose, clumped densely. Rhizomes short, pachymorph. Butt sheaths absent. Culms scendent, pendulous at the tip, 600 cm long, 40–80 mm diam., woody. Culm-internodes terete, thick-walled, smooth, distally glabrous. Lateral branches dendroid. Bud complement 1. Branch complement many, thinner than stem. Culm-sheaths present, deciduous but leaving a persistent girdle, 7–9 cm long, 4 times as long as wide, glabrous, glabrous on shoulders. Culm-sheath ligule 0.2–0.3 mm high. Culm-sheath blade triangular, as wide as sheath at base, demarcated but persistent, erect, 3–5 cm long, 14–16 mm wide, acute. Leaves 5–9 per branch. Leaf-sheaths keeled (above), glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate, 3–6 mm long, dark (brown). Ligule an eciliate membrane, 0.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long, petiole glabrous. Leaf-blades lanceolate, 10–17 cm long, 10–14 mm wide. Leaf-blade venation without cross veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, terminal. Peduncle 5–13 cm long. Racemes 1, single, 7–15 cm long, bearing 8–13 fertile spikelets on each. Rhachis glabrous on surface. Spikelets appressed or ascending. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension or with a barren rhachilla extension or with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear or lanceolate, subterete, 20–28 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachailla internodes elongated between glumes and elongated below proximal fertile floret. Rhachilla elongation 1 mm long (between glumes) or 2–3.5 mm long (below floret).

**Glumes.** Glumes shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 4.5–5.5 mm long, membranous, without keels, keel-less throughout, 5 -veined. Lower glume apex awned, 1 -awned, awn 1.5–3.5 mm long. Upper glume lanceolate, 6–7 mm long, membranous, without keels, keel-less except near apex, 7 -veined. Upper glume mucronate or awned, 1 -awned, awn 1–3 mm long.

**Florets.** Fertile lemma lanceolate, subterete, 18–23 mm long, 1.2–2 mm wide, coriaceous, without keel, 7–11 -veined, more than 3-veined. Lemma margins convolute, covering most of palea, ciliolate. Lemma apex acuminate, pungent or awned, 1 -awned. Principal lemma awn 1–3 mm long overall. Palea tightly convolute around flower, coriaceous, 4 -veined. Palea keels approximate, ciliolate. Rhachilla extension 10–20 mm long. Apical sterile florets 1 in number, lanceolate, 1–1.5 mm long.

**Flower and Fruit.** Lodicules absent. Anthers 3, 4–10 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Northern South America, Western South America, Brazil. Colombia. Brazil West Central, Brazil North.

Amazonas.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. aureus, golden-yellow; lana, wool; -ata, possessing. Nodes with a skirt of golden woolly hairs.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, pendulous at the tip, 1000–2000 cm long, 5–20 mm diam., woody. Culm-internodes terete, solid, dark green or black, smooth, distally glabrous or pubescent. Culm-nodes glabrous. Lateral branches dendroid, intravaginal. Branch complement several, with 1 branch dominant, thinner than stem. Culm-sheaths present, persistent or deciduous but leaving a persistent girdle, 6–25 cm long, 4–5 times as long as wide, without basal lobes, glabrous, hairy on margins, auriculate, with 3 mm high auricles, setose on shoulders, shoulders with 5–15 mm long hairs. Culm-sheath ligule 0.5–1 mm high. Culm-sheath blade lanceolate, deciduous, reflexed, attenuate. Leaves 5–13 per branch. Leaf-sheaths pubescent. Leaf-sheath oral hairs setose, 2–12 mm long, pale. Leaf-sheath auricles absent or erect, 1–2 mm long. Ligule an eciliate membrane, 0.2–0.5 mm long. Leaf-blade base cuneate or broadly rounded, with a brief petiole-like connection to sheath, petiole 0.15–0.35 cm long, petiole glabrous or pubescent. Leaf-blades lanceolate, 9–17 cm long, 10–20 mm wide, light green and glaucous, discolorous with last colour beneath. Leaf-blade surface glabrous or puberulous. Leaf-blade apex acute.

**Inflorescence.** Synflorescence bractiferous, fasciculate, 3–5 cm long, lax, with glumaceous subtending bracts and foliaceous subtending bracts, bracts 80–170 mm long, with axillary buds at base of spikelet, prophylly below lateral spikelets.

Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension or with a barren rachilla extension or with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 27–36 mm long, falling entire.

**Glumes.** Glumes both absent or obscure.

**Florets.** Fertile lemma lanceolate, subterete, 27–36 mm long, coriaceous, dark green or black, shiny, without keel, 11–15 -veined, more than 3-veined. Lemma surface smooth or scaberulous, with distinct germination flap, glabrous. Lemma margins convolute, covering most of palea. Lemma apex setaceously acuminate. Palea tightly convolute around flower, 1 length of lemma, chartaceous. Palea keels contiguous above a sulcus, eciliate or ciliolate. Palea apex lobed, 2 -fid (lobes 2–4 mm). Rachilla extension 30 mm long.

**Flower and Fruit.** Lodicules 3, 4–5 mm long, membranous, ciliate. Anthers 3, 10–13 mm long, purple. Stigmas 2. Ovary pubescent on apex. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Bahia.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): *L. cardo*, hinge; *-alis*, pertaining to. Chief or by transfer of meaning red. The secondary branchlets are subtended by reddish bracts.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose, clumped loosely. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, woody. Culm-internodes terete, solid, dark green or black, retrorsely scabrous, distally glabrous or pubescent. Culm-nodes glabrous. Lateral branches dendroid, intravaginal. Branch complement several, with 1 branch dominant, thinner than stem. Culm-sheaths present, persistent or deciduous but leaving a persistent girdle, 13–33 cm long, 10 times as long as wide, with basal lobes, antorsely scabrous, glabrous, glabrous on margins, without auricles, setose on shoulders, shoulders with 5–10 mm long hairs. Culm-sheath ligule 1 mm high. Culm-sheath blade linear, deciduous, erect or spreading or reflexed, 3–13 cm long, 1–13 mm wide, attenuate. Leaves 5–13 per branch. Leaf-sheaths glabrous on surface or pubescent, outer margin hairy. Leaf-sheath oral hairs setose, 3–8 mm long, pale. Leaf-sheath auricles absent. Ligule an eciliate membrane, 0.2–0.5 mm long. Leaf-blade base cuneate or broadly rounded, with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long, petiole glabrous or pubescent. Leaf-blades linear or lanceolate, 6–11 cm long, 4–8 mm wide, dark green and light green, discolorous with last colour beneath. Leaf-blade venation without cross veins. Leaf-blade surface glabrous. Leaf-blade apex acute.

**Inflorescence.** Synflorescence bractiferous, paniculate, 3–6 cm long, lax, with glumaceous subtending bracts and foliaceous subtending bracts, bracts 70–200 mm long, with axillary buds at base of spikelet, prophyllate below lateral spikelets.

Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rhachilla extension or with a barren rhachilla extension or with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, 29–35 mm long, falling entire.

**Glumes.** Glumes both absent or obscure.

**Florets.** Fertile lemma lanceolate, subterete, 29–35 mm long, 1.8–2.3 mm wide, coriaceous, without keel, more than 3-veined. Lemma surface with distinct germination flap, pubescent. Lemma margins convolute, covering most of palea. Palea tightly convolute around flower, chartaceous.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Northeast.

Bahia.


**TYPE** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Brazil, Esplanada: *Pinto 681* (US holo, CEPEC).

**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (20, Fig. 4), E.J.Judziewicz et al, *American Bamboos* (1999) (163, Fig. 73).

**Illustrations (Journals):** *Smithsonian Contributions to Botany* (9: 51, Fig. 21 (1973)).


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

cm long, 5–10 mm wide. Leaf-blade venation without cross veins. Leaf-blade surface glabrous or puberulous. Leaf-blade apex acute.

**Inflorescence.** Synflorescence bractiferous, paniculate, lax, with glumaceous subtending bracts or foliaceous subtending bracts.

Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 15 mm long, falling entire.

**Glumes.** Glumes both absent or obscure.

**Florets.** Fertile lemma lanceolate, subterete, 15 mm long, chartaceous, without keel, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma apex acuminate. Palea tightly convolute around flower, chartaceous, 2 -veined. Palea keels approximate, ciliolate.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil Northeast.

Bahia. Bahia.


**TYPE** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Brazil, Olivenca: *Froes 19947* (US holo, CEPEC, IAN).

**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (30, Fig. 8).

**Illustrations (Journals):** *Smithsonian Contributions to Botany* (9: 22, Fig.22: 54, Fig. 23 (1973)).


**Derivation** (Clifford & Bostock 2007): *L. radius*, spoke of a wheel; -*ata*, possessing. With racemes arranged in fascicles along a central axis.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Synflorescence bractiferous, globose, 20–30 cm long, with glumaceous subtending bracts, bracts 7–9 mm long, with axillary buds at base of spikelet.

Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with a barren rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 15–19 mm long, falling entire.

**Glumes.** Glumes both absent or obscure.

**Florets.** Fertile lemma lanceolate, subterete, 13–17 mm long, chartaceous, dark brown, shiny, without keel, 7–9 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins convolute, covering most of palea. Lemma apex acuminate. Palea tightly convolute around flower, 1.1 length of lemma, chartaceous, 2 -veined. Palea keels approximate, ciliolate. Rachilla extension 1 length of fertile floret.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Northeast.

Bahia. Bahia.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose, clumped densely. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, pendulous at the tip, 600–700 cm long, woody, without nodal roots. Culm-internodes terete, thick-walled, 14–81 cm long, mid-green, distally pubescent. Culm-nodes with distinct supra-nodal ridge. Lateral branches dendroid. Bud complement 1. Branch complement one or two or three, thinner than stem. Culm-sheaths present, deciduous but leaving a persistent girdle, 8–21 cm long, glabrous on margins, without auricles, setose on shoulders, shoulders with straight hairs, shoulders with 11–22 mm long hairs. Culm-sheath ligule 0.3–0.4 mm high. Culm-sheath blade triangular, as wide as sheath at base, demarcated but persistent, erect or reflexed, 4–9.6 cm long, 3–7 mm wide, glabrous on surface, acute. Leaves 6–15 per branch. Leaf-sheaths 3.5–6.5 cm long, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, erect, 8–13 mm long, dark (brown). Ligule an eciliate membrane, 0.4–0.5 mm long. Collar with external ligule. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.3–0.5 cm long. Leaf-blades lanceolate, 13.7–26.3 cm long, 21–43 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Brazil. Brazil Southeast. Espirito Santo.

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**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): *L. amplus*, large; *-issima*, most. Culms taller than many other species of the genus.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2–5 mm long, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume lanceolate, 5–6 mm long, membranous, without keels, 5 -veined. Upper glume apex acute.
Florets. Fertile lemma lanceolate, 5–7 mm long, chartaceous, without keel, 5–7 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma apex acute.


Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil Southeast.


TYPE from Brazil. Basionym or Replaced Name: Arundinaria aristulata Döll, Fl. Bras. 2(3): 165, pl. 44 (1880).


Illustrations (Journals): Hoehnea (40: 321, fig. 3 (2013)).


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 3–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, 12–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent, hairy at tip.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.7–0.8 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex obtuse, muticous or awned, 1 -awned. Upper glume lanceolate, 0.3–0.4 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume apex obtuse, muticous or awned, 1 -awned.

Florets. Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, elliptic, awned. Fertile lemma elliptic, 8 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma apex acute, 1 -awned. Principal lemma awn 2–3 mm long overall. Palea 0.8–0.9 length of lemma. Palea keels ciliolate. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.


Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South.


**TYPE** from Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Colombia, Paramo de Cruz Verde: *Cleen* 2879 (COL holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Bogota, Colombia.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo. Rhizomes short, pachymorphic. Butt sheaths absent. Culms erect or decumbent or scandent, 30–110 cm long, 1–2.5 mm diam., woody. Culm-internodes terete, thin-walled, 4–10 cm long, distally glabrous. Culm-nodes without obvious supra-nodals ridge. Lateral branches dendroid. Bud complement 1. Branch complement one, solitary. Culm-sheaths present, persistent, 2.4–6.2 cm long. Culm-sheath blade triangular, deciduous, reflexed, 0.6–3.4 cm long. Leaf-sheaths present, pubescent. Leaf-sheath oral hairs setose, 2–13 mm long, pale. Ligule an eciliate membrane, 0.5 mm long, pubescent on abaxial surface, truncate. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.05–0.15 cm long, petiole pubescent. Leaf-blades reflexed, lanceolate, 1.4–4.2 cm long, 2–5 mm wide. Leaf-blade venation without cross veins. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins cartilaginous, serrulate. Leaf-blade apex abruptly acute.

**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, 4–14 cm long, 1–2 cm wide. Panicle axis angular, puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 1–12 mm long, pubescent.

**Fertile Spikelets.** Spikelets comprising 3–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, subterete, 9.7–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1–2.3 mm long.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.5–5.5 mm long, membranous, without keels, 3 -veined. Lower glume primary vein scabrous. Lower glume surface puberulous. Lower glume apex attenuate. Upper glume ovate, 4.8–6.8 mm long, membranous, without keels, 5–7 -veined. Upper glume surface pubescent, hairy above. Upper glume margins ciliate. Upper glume apex acute.

**Florets.** Fertile lemma ovate, 3.5–6 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface puberulous, hairy above. Lemma margins ciliate, hairy above. Lemma apex obtuse. Palea 2.5–5 mm long, 2–4 -veined. Palea keels ciliate, adorned above, with 0.5 of their length adorned. Palea surface puberulous, hairy on back and on flanks, hairy above. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 0.5–0.9 mm long. Anthers 3, 0.8–2.8 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia.


**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (34, Fig. 3).

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating location. From Bolivia.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 10–19 cm long, 15–30 mm wide. Leaf-blade surface scabrous, glabrous. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, effuse, 20–26 cm long. Primary panicle branches spreading. Panicle branches glabrous, with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 10–45 mm long.

**Fertile Spikelets.** Spikelets comprising 6–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 12–30 mm long, 0.5–1 mm wide, breaking up at maturity, disarticulating below each fertile floret.


**Florets.** Fertile lemma lanceolate or oblong, 6 mm long, herbaceous, purple, without keel, 7–9 -veined, more than 3-veined. Lemma margins ciliate, hairy above. Lemma apex acute. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent South America. Country/Province/State. Western South America. Bolivia.


**Illustrations (Journals):** *J. Bot. Res. Inst. Texas* (4 (2) 571, Fig.1 (2010)).

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 159–200 cm long, 10–12 mm diam., woody. Culm-internodes terete, thin-walled, distally glabrous. Lateral branches dendroid. Culm-sheaths present, 3–18 cm long, glabrous, without auricles, glabrous on shoulders. Culm-sheath ligule 0–5 mm high. Culm-sheath blade lanceolate, erect, 0.25 cm long, 1.5 mm wide. Leaves 3 per branch. Leaf-sheaths striately veined, glabrous on surface or pubescent. Leaf-sheath oral hairs lacking. Leaf-sheath auricles absent. Ligule an eciliate membrane, 20–25 mm long. Collar with external ligule. Leaf-sheath base cuneate or broadly rounded, with a brief petiole-like connection to sheath, petiole 0.4–0.6 cm long. Leaf-blades lanceolate or ovate, 18–25 cm long, 53–67 mm wide. Leaf-blade surface glabrous. Leaf-blade margins cartilaginous. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 2 basal sterile florets, 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear or oblong, laterally compressed, 40–43 mm long, 3–4.1 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret. Rhachilla elongation 1.9–2.2 mm long, pubescent.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2.7–4.4 mm long, 0.5–0.66 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume surface glabrous. Lower glume margins ciliolate. Lower glume apex acute. Upper glume lanceolate, 4.8–6.7 mm long, 0.5 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume surface glabrous. Upper glume margins pubescent. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, similar, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate, 6.1–10.1 mm long, membranous, 7–9 -veined, pubescent on margins, acute. Lemma of upper sterile floret lanceolate, 9–11 mm long, membranous, ciliolate on margins, acute. Fertile lemma lanceolate, 11.7–14.9 mm long, 2.5–2.8 mm wide, chartaceous, without keel, 9–11 -veined, more than 3-veined. Lemma margins ciliolate. Lemma apex
acute. Palea elliptic, 8.4–12.5 mm long, 1 length of lemma. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, lanceolate, 1.5 mm long, veined, ciliate, hairy across the apex. Anthers 3, 3.6–6.2 mm long, orange.

**Distribution (TDWG).** Continent: South America.
Country /Province /State: Western South America. Bolivia.


**Illustrations (Books):** J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (43, Fig. 23).

**Derivation (Clifford & Bostock 2007):** L. -ensis, denoting origin. From Maizo del Chimanta District, Venezuela.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 9–15 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 13–40 mm long. 1.8–2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2–3 mm long.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 1.5–1.7 mm long, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 3–4.5 mm long, membranous, without keels, 3–5 -veined. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, developed, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret present, similar to upper glume, ovate, 4.5–6 mm long, purple, 3–5 -veined, acute. Fertile lemma ovate, (6–)8–10 mm long, 3–4 mm wide, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface glabrous or puberulous. Lemma margins ciliolate. Lemma apex obtuse. Palea 7–9 mm long. Palea keels ciliolate.

**Flower and Fruit.** Lodicules 3, 0.9–1 mm long, veined, ciliate. Anthers 3, 2.5–3.3 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: South America.
Country /Province /State: Northern South America. Venezuela.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.
**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 100–120 cm long, 4 mm diam., woody. Culm-internodes terete, thick-walled, antrorsely scabrous, distally glabrous. Culm-nodes with distinct supra-nodal ridge. Lateral branches dendroid. Bud complement 1. Branch complement one, solitary. Leaf-sheaths striately veined, glabrous on surface. Leaf-sheath oral hairs ciliate, 2–4 mm long. Ligule a ciliolate membrane, 0.2–0.3 mm long. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long, petiole glabrous. Leaf-blades linear or lanceolate, 10–13 cm long, 10–14 mm wide, dark green and glaucous, discolorous with last colour beneath. Leaf-blade surface puberulous, hairy abaxially. Leaf-blade margins cartilaginous, scabrous. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 5–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 30–55 mm long, 3–4.5 mm wide, breaking up at maturity, disarticulating below each fertile floret.


**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 12–16 mm long, 7–9 -veined, puberulous, ciliate on margins, awned. Awn of lower sterile floret 4–7 mm long. Fertile lemma lanceolate, 18–21 mm long, chartaceous, without keel, 7–9(–11) -veined, more than 3-veined. Lemma surface puberulous, hairy below. Lemma apex awned, 1 -awned. Principal lemma awn 5–9 mm long overall. Palea 10–15 mm long, 4 -veined, 2-keeled. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 2 mm long.

**Distribution (TDWG).** Continent South America.

Country Province /State. Western South America Bolivia.


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 100–150 cm long, 4–5 mm diam., woody. Culm-internodes terete, thin-walled, distally glabrous. Lateral branches dendroid. Bud complement 1. Branch complement one, solitary, as thick as stem. Culm-sheaths present. Leaf-sheaths keeled, striately veined, glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs setose, 10–18 mm long. Ligule an eciliate membrane, 1 mm long, brown, erose, truncate. Collar with external ligule. Leaf-blade base cuneate or broadly rounded, symmetrical, with a brief petiole-like connection to sheath, petiole 0.3–0.4 cm long, petiole glabrous. Leaf-blades reflexed, deciduous at the ligule, lanceolate, 12–15 cm long, 22–28 mm wide. Leaf-blade midrib indistinct. Leaf-blade venation without cross veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.
**Inflorescence.** Inflorescence a panicle. Peduncle 10–30 cm long. Panicle open, pyramidal, effuse, 12.5–28 cm long, 2.5–5 cm wide. Primary panicle branches ascending, 10–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 6–60 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 11–13 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2–3 mm long, 0.5 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 4–5 mm long, 0.5–0.75 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1. Lemma of lower sterile floret lanceolate, 6–7 mm long, 5–7 -veined, obscurely veined. Fertile lemma lanceolate, 8–10 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma margins ciliolate. Lemma apex acute. Palea 8 mm long. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3. Anthers 3, 4 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America. Guyana, Venezuela. Roraima.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.


**Illustrations:** None found.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 8–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 25–35 mm long, 1.5–2.7 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2–2.5 mm long, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume lanceolate, 5–5.7 mm long, membranous, 3–5 -veined. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 8–10 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface puberulous. Lemma apex apiculate, mucronate. Palea 6.5–7.5 mm long, 2 -veined.

**Flower and Fruit.** Anthers 3, 3 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America. Venezuela.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. spread out. Inflorescence an open panicle.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 150 cm long, 5 mm diam., woody. Culm-internodes terete, thin-walled. Culm-nodes without obvious supra-nodal ridge. Lateral branches suffrutescent. Bud complement 1. Branch complement one, solitary. Culm-sheaths present, deciduous, setose on shoulders. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.4 cm long. Leaf-blades lanceolate, 10–15 cm long, 20–25 mm wide, mid-green or glaucous, discolorous with last colour beneath. Leaf-blade venation without cross veins. Leaf-blade surface glabrous. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 20–30 mm long, 3 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes eventually visible between lemmas, scaberulous.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3 mm long, 0.5 length of upper glume, membranous, without keels, 1 -veined. Lower glume apex obtuse. Upper glume lanceolate, 6 mm long, 0.75 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate, 6 mm long, 5 -veined, obtuse, mucronate. Fertile lemma elliptic, 7–8 mm long, chartaceous, without keel, 5–7 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex acute, mucronate. Palea 1 length of lemma. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 1.5 mm long, ciliate. Anthers 3, 3 mm long. Stigmas 2.  

**Distribution (TDWG).** Continent: South America.  


**Accepted by:** W.D.Clayton & K.Harman, *GrassBase* (2008) and online.  


**Illustrations:** None found.  

**Derivation** (Clifford & Bostock 2007): L. *fimbriae*, fringe; -ata, possessing; *folium*, leaf.  

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect or scandent, 150–400 cm long, 5–10 mm diam., woody. Culm-internodes terete, 30 cm long, distally glabrous. Culm-nodes without obvious supra-nodal ridge. Lateral branches dendroid,
intravaginal. Bud complement 1. Branch complement one. Culm-sheaths present, 10–15 cm long, glabrous, setose on shoulders, shoulders with curved hairs, shoulders with 10–30 mm long hairs. Culm-sheath blade lanceolate, narrower than sheath, deciduous, reflexed, 6–12 cm long. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, flat, curly, 30–120 mm long, pale. Ligule a ciliate membrane. Collar with external ligule. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long. Leaf-blades lanceolate, 17.5–30 cm long, 22–60 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade margins ciliate (fimbriate), hairy at base. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 30–50 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 3 empty glumes, persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 1.7–3.2 mm long, membranous, without keels. Lower glume apex mucronate or awned, 1 -awned, awn 2.2–3 mm long. Upper glume lanceolate, 5–7.5 mm long, membranous, without keels. Upper glume awned, 1 -awned, awn 2–2.3 mm long.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret lanceolate, 7.5–9 mm long, awned. Awn of lower sterile floret 1.2–3.6 mm long. Fertile lemma lanceolate, 6.5–9.5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma apex awned, 1 -awned. Principal lemma awn 2.4–5 mm long overall. Palea 5–7 mm long.

Flower and Fruit. Anthers 3, 3.5 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast, Brazil South.
Sao Paulo. Parand, Santa Catarina.


TYPE from Bolivia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Dept. La Paz: Prov.: Franz Tamayo, Parque Nacional Madidid, entre Carjata y Río Yana Lomas, 1700 m, 29 Jun 2005, bosque con Juglans boliviana, sabanas y matorrales subandino superior estacionales, pasto macollero colonial hasta 2.5 m, frutos maduros y viejos, abundante eb chaparrales quemados, A. Fuentes, E. Cuevas & R. Cuevas 9112 HT: MO; IT: LPB, UWSP.

Illustrations (Journals): J. Bot. Res. Inst. Texas (5 (2): 493, Fig.5 (2011)).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 7–11 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 23–40 mm long, 4–5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2–3.5 mm long, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume lanceolate, 3.5–5 mm long, membranous, without keels, 3–5 -veined. Upper glume apex acute.
Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 6–7 mm long, 5–9 -veined, acute. Fertile lemma lanceolate, 8–9 mm long, herbaceous, without keel, 7–11 -veined, more than 3-veined. Lemma surface puberulous, hairy below. Lemma apex acute. Palea 8–9.5 mm long. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 1.3–1.5 mm long, veined, ciliate. Anthers 3. Stigmas 2.

Distribution (TDWG). Continent. South America.
Country/Province/State. Western South America. Bolivia.


Illustrations: None found.


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Fertile Spikelets. Spikelets comprising 6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 30 mm long, 2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3 mm long, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume lanceolate, 4 mm long, membranous, without keels, 5 -veined. Upper glume apex obtuse, mucronate.

Florets. Fertile lemma ovate, 6 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pubescent, hairy at base. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn 2 mm long overall. Palea 1 length of lemma. Palea keels scaberulous.


Distribution (TDWG). Continent. South America.


Inflorescence. Inflorescence a panicle. Panicle open, ovate or globose, effuse, 9–18 cm long. Primary panicle branches 1-nate, bearing 3–6 fertile spikelets on each lower branch. Panicle axis smooth. Panicle branches with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5 mm long, smooth.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 20–30 mm long, 10–25 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes 6 mm long, glabrous.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 4 mm long, membranous, red, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 6 mm long, membranous, red, without keels, 7 -veined. Upper glume apex acute.

Florrets. Fertile lemma lanceolate, 10 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma lateral veins without cross-veins. Lemma apex acute. Palea 1 length of lemma, 6 -veined.


Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.
upper sterile. Spikelets lanceolate, laterally compressed, 15–20 mm long, 2–5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3 mm long, 0.75 length of upper glume, membranous, without keels, 3 -veined. Lower glume ovate, 0.5 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, 7.5–8 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma apex acute. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG), Continent.** South America.  
**Country /Province /State.** Western South America. Ecuador, Peru.


**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (40, Fig. 5).  

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 15–30 mm long, 0.5–1 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1–4 mm long, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, awned, 1 -awned, awn 1–3 mm long. Upper glume ovate, 3–4 mm long, membranous, without keels. Upper glume apex acute, awned, 1 -awned, awn 0.5–5 mm long.

**Florets.** Fertile lemma lanceolate, 8–10 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acute, muticous or awned, 1 -awned. Principal lemma awn 3.5 mm long overall. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3. Anthers 3, 6 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.  
**Country /Province /State.** Western South America. Bolivia.


**Illustrations (Journals):** *Ruizia* (13:24, Fig.1h-i (1993)).

**Derivation** (Clifford & Bostock 2007): *L. hirtus*, hairy; *-ula*, diminutive. Somewhat hairy with respect to some or all parts.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 22–28 mm long, 2–5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2 mm long, 0.5 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 0.5 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, 10 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acute. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Ecuador, Peru.


**TYPE** from Peru. **Basionym or Replaced Name:** *Arundinaria humillima* Pilg., *Verh. Bot. Vereins Prov. Brandenburg* 47: 100 (1905)


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. most low growing. Low growing with respect to related species.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence a panicle. Panicle open, pyramidal, effuse, 10 cm long. Panicle branches capillary. Spikelets ascending or spreading, solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 10–20 mm long.
**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 9–10 mm long, 0.5–1 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1.5–2 mm long.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.5 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 0.5 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex obtuse.

**Florets.** Fertile lemma lanceolate, 4.4–4.6 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma apex acute. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.

**Country/Province/State.** Western South America. Peru.


**Type** from Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Dept. La Paz: Prov. Bautista Saavedra, Área Natural de Manejo Integrado Apolobamba, sector Tajamarca, más allá de Chaka, por el antiguo camino Laji Sorapata - Apolo, 14°52’12”S, 68°46’28”W, 2906 m, 12 Apr 2009, bosque bajo de yungas en caída de monte inferior pluvial de filos, planeas alcornadas, tejido en siliquas, bambú cerca de 1.7 m, botones, flores, espiquillas pardas, A. F. Fuentes & M. Villalobos 14008 HT: MO; IT: LPB, UWSP.

**Illustrations (Journals):** *J. Bot. Res. Inst. Texas* (5 (2): 490, Fig.3 (2011)).

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms nodding at the tip or drooping at the tip, 100–170 cm long, 1–35 mm diam., woody. Culm-internodes terete, solid. Lateral branches dendroid. Branch complement one. Leaves 9 per branch. Leaf-sheaths hispid, hairs yellow and purple. Leaf-sheath oral hairs setose, curly, 20–40 mm long. Leaf-sheath auricles erect, 2.5–5 mm long. Ligule absent. Collar with external ligule. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.4–0.6 cm long, petiole pubescent. Leaf-blades reflexed, lanceolate, 13–17.5 cm long, 40–47 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute.

**Inflorescence.** Synflorescence on a separate leafless culm (or few leaves).


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 30–35 mm long, 2–2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3–1.3 mm long, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate or ovate, 3–4.7 mm long, membranous, without keels, 5–7 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret ovate, 5–6 mm long, acute. Fertile lemma ovate, 6–7.3(–9) mm long, herbaceous, purple, without keel, 7–9 -veined, more than 3-veined. Lemma apex acute. Palea 6–7.5 mm long. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3. 1.3–1.7 mm long, veined, ciliate. Anthers 3, 2.7–3.5 mm long, purple. Stigmas 2.

**Distribution (TDWG).** Continent. South America.

**Country/Province/State.** Western South America. Bolivia.


Illustrations (Journals): *Novon* (1:81, Fig.3 (1991)).


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 500–1000 cm long, 10 mm diam., woody. Culm-internodes terete, thick-walled, smooth, distally glabrous. Culm-nodes without obvious supra-nodal ridge. Lateral branches dendroid. Bud complement 1. Culm-sheaths present. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs setose, 10–20 mm long, dark. Ligule an eciliate membrane, 0.5–0.7 mm long. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3–0.6 cm long. Leaf-blades lanceolate or ovate, 15–20 cm long, 30–45 mm wide. Leaf-blade surface glabrous or puberulous, hairy abaxially. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 5–23 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, curved, subterete, 20–70 mm long, 2–3.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3–4 mm long.

Glumes. Glumes persistent, smaller than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2.5–3 mm long, membranous, purple, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume ovate, 5–6 mm long, membranous, purple, without keels, 5–7 -veined. Upper glume surface puberulous. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, developed, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret present, similar to upper glume, ovate, 7–8 mm long, 3–5 -veined, acute. Fertile lemma ovate, 10–13 mm long, 4 mm wide, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface puberulous. Lemma apex acute. Palea 7–8 mm long. Palea keels ciliolate.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. loose. Inflorescence much branched either as a single panicle or from branching of the culms.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 100–120 cm long, 4–4.5 mm diam., woody. Culm-internodes terete, thin-walled, 7.5–21 cm long. Lateral branches dendroid, erect. Bud complement 1. Branch complement one, solitary. Culm-sheaths present. Leaf-sheaths 7.5–10 cm long, glabrous on surface. Leaf-sheath oral hairs setose, 15–20 mm long. Ligule an eciliate membrane, 0.8–1 mm long. Collar with external ligule. Leaf-
blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate or oblong, 15–24.5 cm long, 42–48 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle open, ovate, 30 cm long. Primary panicle branches 3–4 in number, ascending or spreading or drooping. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 35–48 mm long, 3 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 8 mm long.

**Glumes.** Glumes several, 3 empty glumes, persistent, similar, shorter than spikelet. Upper glume ovate, 13 mm long, membranous, without keels.

**Florets.** Fertile lemma ovate, 17–20 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma apex acute, awned, 1 -awned. Principal lemma aven 8.5–14.2 mm long overall. Palea 15 mm long. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 2.8 mm long. Anthers 3, 10.5 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Gulf (Mexico), Southwest Mexico, Southeast Mexico.


**Illustrations:** None found.


**Derivation** (Clifford & Bostock 2007): *L. longus*, long; *arista*, bristle. Lemmas or glumes long awned.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, erect at the tip or inclined at the tip, 200–400 cm long, 9–18 mm diam., woody. Culm-internodes terete, thin-walled, 30–40 cm long, distally glabrous. Culm-nodes swollen, with distinct supra-nodal ridge. Lateral branches dendroid. Bud complement 1. Branch complement one, solitary. Culm-sheaths present, 10.5–13 cm long, auriculate, setose on shoulders. Culm-sheath blade lanceolate, reflexed, 4.5–5.5 cm long. Leaf-sheaths keeled, glabrous on surface, outer margin glabrous. Leaf-sheath oral hairs setose, erect, 15–40 mm long. Leaf-sheath auricles falcate. Ligule an eciliate membrane, 0.5–1 mm long. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.4–1.2 cm long. Leaf-blades reflexed, ovate, 14–29 cm long, 35–100 mm wide. Leaf-blade venation without cross veins. Leaf-blade surface smooth or scabrous, rough abaxially. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 24–34 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2.5–5 mm long, pubescent. Floret callus evident, 3–5 mm long.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5–6 mm long, membranous, without keels, 3 -veined. Lower glume surface pubescent. Lower glume apex acute, awned, 1 -awned, awn 1–4 mm long. Upper glume lanceolate, 6–7 mm long, membranous, without keels, 5–7 -veined. Upper glume surface pubescent. Upper glume apex acuminate, awned, 1 -awned, awn 3.7–4.8 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 11–13 mm long, membranous, 7–9 -veined, pubescent, awned. Awn of lower sterile floret 4.5–5.5 mm long.
Fertile lemma ovate, 10–20.4 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn straight or curved, 9.5– 20 mm long overall. Palea 2.5–11.2 mm long, 4 -veined. Palea surface pubescent. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3. Anthers 3. 5–5.4 mm long. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.
Country /Province /State. Western South America. Ecuador.


**TYPE** from Bolivia. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Bolivia, Nor Yungas: *Solomon 5205* (LPB holo, MO).

**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (34, Fig. 3).


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 6–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 15–23 mm long, 0.5–1 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1.5– 2 mm long, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 2.5–3.5 mm long, membranous, without keels, 3 -veined. Upper glume margins ciliate. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 6–6.5 mm long, herbaceous, without keel, 7 -veined, more than 3-veined. Lemma apex acute. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America.
Country /Province /State. Western South America. Bolivia.


**Illustrations (Journals):** *J. Bot. Res. Inst. Texas* (5 (2): 496, Fig.7 (2011)).

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3–0.4 cm long. Leaf-blades ascending, lanceolate or ovate, 22–33 cm long, 67–93 mm wide, indurate. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade margins cartilaginous. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 3–4 basal sterile florets, 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, (20–)25–35 mm long, 1.9–2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 1–3(–5) mm long, membranous, without keels, 1–3(–5) -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume lanceolate, 2–3(–5) mm long, membranous, without keels, 3–7 -veined. Upper glume apex acute.

**Florets.** Basal sterile florets 2 or more, barren, without significant palea. Lemma of lower sterile floret lanceolate, 5–7 -veined, acute. Fertile lemma lanceolate, (7–)8.5–10 mm long, herbaceous, without keel, 5–9 -veined, more than 3-veined. Lemma apex acute. Palea 2.3–4.5 mm long. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 0.5–2 mm long, veined, ciliate. Anthers 3, 0.5–2 mm long. Stigmas 2.

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Western South America. Bolivia.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

**TYPE** from Guyana. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Guyana: Potaro-Sipuaruni Region, upper slopes of Mt. Wokomung, 5°5’N, 59°0’W, 1530 m, Hedysomum-bamboo dominated moist forest, bamboo with culms at base to 2 cm diam., overall height 4 m, common and at times dense on upper slopes, sterile, 14 Jul 1989, *B.M. Boom & G.J. Samuels 9224* (HT: FDG; IT: MO (3 sheets), NY).

**Illustrations:** None found.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Northern South America. Guyana.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *parvus,* small; *flos,* flower. Spikelets small or with few florets.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 25 mm long, 0.5–1 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.5 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 0.5 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma oblong, 10–12 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma apex acute. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent. South America. Country /Province /State. Western South America. Peru.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

Flower and Fruit. Lodicules 3, obovate, ciliate. Anthers 3, 9 mm long. Stigmas 2. Caryopsis with adherent pericarp, oblong, 8–10 mm long.

Distribution (TDWG). Continent. South America.
Country /Province /State. Mesoamerica. Costa Rica, Panama.


Illustrations: None found.


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Fertile Spikelets. Spikelets comprising 3–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 20–40 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 4.5 mm long, membranous, without keels. Lower glume apex acuminate. Upper glume lanceolate, 8 mm long, membranous, without keels. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 15 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex acute, awned, 1 -awned. Principal lemma awn 1–3 mm long overall. Palea 10 mm long. Palea keels ciliolate, adorned above. Apical sterile florets resembling fertile though underdeveloped.


Distribution (TDWG). Continent. South America.
Country /Province /State. Western South America. Colombia, Ecuador, Peru.


Illustrations: None found.


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect or geniculately ascending, 50–100 cm long, 2–3 mm diam., woody. Culm-internodes terete, thick-walled, 8–10 cm long, distally pubescent. Culm-nodes swollen, with distinct supra-
Nodal ridge. Lateral branches dendroid. Bud complement 1. Branch complement one, solitary. Culm-sheaths present, 5–5.5 cm long, without auricles, glabrous on shoulders or setose on shoulders, shoulders with 2–6 mm long hairs. Culm-sheath blade lanceolate, reflexed, 0.8 cm long. Leaf-sheaths glabrous on surface or pubescent, outer margin glabrous. Leaf-sheath oral hairs setose, 5–6 mm long. Ligule an eciliate membrane, 0.5 mm long. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.15 cm long. Leaf-blades reflexed, ovate, 5–7 cm long, 6–14 mm wide. Leaf-blade venation without cross veins. Leaf-blade surface glabrous or pubescent, hairy abaxially. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence a panicle. Panicle open, oblong, dense, 5.5–11 cm long. Primary panicle branches appressed or ascending. Panicle axis pubescent. Panicle branches angular, pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 2–9 mm long, pubescent.

**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8.4–11.2 mm long, breaking up at maturity, disarticulating below each fertile floret (or the lowest persistent). Floret callus evident, 1–2 mm long.


**Florets.** Fertile lemma ovate, 5.5–9.2 mm long, chartaceous, without keel, 5–7 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex setaceously acuminate. Palea 4.3–6.3 mm long, 4 -veined. Palea keels ciliate. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.


\[ n = 20 \] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia.


**TYPE** from Venezuela. **Basionym or Replaced Name:** *Arthrostylidium purpuratum* McClure, *J. Wash. Acad. Sci.* 32(6): 170, f. 3 (1942).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): *L. purpureus*, purple; -ata, possessing. Inflorescence or spikelets purple.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms woody. Culm-internodes terete, thick-walled. Lateral branches dendroid. Bud complement 1. Branch complement in a clump, subtended by a bare patch above the node, with subequal branches. Culm-sheaths present. Leaf-sheaths striately veined, glabrous on surface. Leaf-sheath oral hairs setose, 5–10 mm long. Leaf-sheath auricles erect. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long, petiole glabrous. Leaf-blades lanceolate, 5–10.5 cm long, 6–12 mm wide. Leaf-blade venation with 8–10 secondary veins, without cross veins. Leaf-blade surface pubescent, sparsely hairy, hairy abaxially. Leaf-blade margins cartilaginous, scaberulous. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the
upper sterile. Spikelets linear, laterally compressed, 35–45 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes clavate, 4–7 mm long, eventually visible between lemmas.

**Glumes.** Glumes persistent, shorter than spikelet. Lower glume lanceolate, 3–4 mm long, chartaceous, without keels, 4 -veined. Lower glume primary vein scabrous. Lower glume apex acute, awned, 1 -awned, awn 1–2 mm long. Upper glume lanceolate, 7–8 mm long, purple, 1-keeled or 2-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume surface glabrous to pubescent, hairy above. Upper glume margins ciliolate. Upper glume apex entire or dentate, 2 -fid, acute, awned, 1 -awned, awn 1–2 mm long.

**Florets.** Fertile florets increasing in size upwards. Fertile lemma lanceolate, 10–11 mm long, chartaceous, purple, without keel, 7 -veined, more than 3-veined. Lemma surface scabrous. Lemma margins ciliate, hairy above. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 7 mm long overall. Palea 9–10 mm long, 0.9 length of lemma. Palea keels ciliolate. Palea surface scabrous, pubescent, hairy on back, hairy above. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 1.5–2 mm long, ciliate. Anthers 2, 7 mm long. Stigmas 2. Ovary umbonate, glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** South America.

**Country /Province /State.** Northern South America. Venezuela.


**TYPE** from Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Colombia, Quindiu Mt.: Goudot (P holo).

**Illustrations (Books):** E.J.Judziewicz et al, *American Bamboos* (1999) (166, Fig. 75 & 167, Fig. 76).

**Illustrations (Journals):** *Smithsonian Contributions to Botany* (9: 57, Fig. 24; 59, Fig. 25; 60, Fig. 26 (1973)).


**Derivation** (Clifford & Bostock 2007): vernacular name in Colombia for the flute made from the internode of *Aulonemia queko*.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 5–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 25–50 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 3 mm long, 0.6 length of upper glume, membranous, without keels, 7 -veined. Lower glume surface puberulous. Lower glume apex obtuse, awned, 1 -awned, awn 5 mm long. Upper glume ovate, 5 mm long, 0.5 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume surface puberulous. Upper glume apex obtuse, awned, 1 -awned, awn 5 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, oblong, 10 mm long, 7 -veined, puberulous, obtuse, awned. Awn of lower sterile floret 6 mm long. Fertile lemma oblong, 10–12 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface puberulous. Lemma apex obtuse, pungent, 1 -awned. Principal lemma awn 5 mm long overall. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.
Distribution (TDWG). Continent. South America.
Country /Province /State. Western South America. Colombia, Ecuador, Peru.


Derivation (Clifford & Bostock 2007): L. radius, spoke of a wheel; -ata, possessing. With racemes arranged in fascicles along a central axis.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Fertile Spikelets. Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 30–50 mm long, 2 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two or several, 2–3 empty glumes, persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 5 mm long, 0.9 length of upper glume, membranous, without keels. Lower glume apex setaceously acuminate. Upper glume ovate, 5 mm long, membranous, without keels. Upper glume apex setaceously acuminate.


Distribution (TDWG). Continent. South America.


Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Fertile Spikelets. Spikelets comprising 8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 40 mm long, 2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 4 mm long, glabrous.


Florets. Fertile lemma lanceolate, 7–8 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma apex obtuse, mucronate. Palea keels ciliolate.


Distribution (TDWG). Continent. South America.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. robust. Culms tall, or leaf-blades or spikelets large.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Fertile Spikelets. Spikelets comprising 4–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 11–16 mm long, breaking up at maturity,
disarticulating below each fertile floret. Rhachilla internodes 1.5–2 mm long, glabrous or pubescent. Floret callus evident, 1–2 mm long.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 2.5–4 mm long, membranous, without keels, 3 -veined. Lower glume apex acute, awned, 1 -awned, awn 0.5–1 mm long. Upper glume ovate, 4–4.7 mm long, membranous, without keels, 5–7 -veined. Upper glume surface puberulous, hairy at apex. Upper glume apex acuminate.

**Florets.** Fertile lemma ovate, 5.5–6.7 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface puberulous. Lemma apex acuminate. Palea 5.3–6.4 mm long, 2 -veined. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 0.9–1.2 mm long, ciliate. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America. Country /Province /State. Western South America. Colombia.


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

**Habit, Vegetative Morphology.** Perennial, woody bamboo, caespitose. Butt sheaths absent. Culms 50 cm long, 7 mm diam., woody. Culm-internodes terete, thin-walled, distally glabrous. Culm-nodes viscid (below node). Lateral branches dendroid. Bud complement 1. Branch complement one, solitary. Culm-sheaths present, yellow and purple, distinctly mottled with last colour, glabrous. Culm-sheath blade inconspicuous or lanceolate, reflexed, 0–2 cm long. Leaves 6–12 per branch. Leaf-sheaths viscid, striatedly veined, glabrous on surface or pubescent, outer margin glabrous. Leaf-sheath oral hairs scanty, curly, 4–8 mm long. Leaf-sheath auricles absent or erect, 3 mm long. Ligule an eciliate membrane, 1.5–2.5 mm long. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.5–0.6 cm long. Leaf-blades reflexed, lanceolate, 16–18 cm long, 20–27 mm wide, indurate, viscid. Leaf-blade surface scaberulous, rough abaxially, glabrous. Leaf-blade margins cartilaginous, scaberulous. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 6–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 18.3–23.1 mm long, 2.9–5.5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2.1–3 mm long, 0.33 length of upper glume, membranous, without keels, 3–7 -veined. Lower glume surface pubescent. Lower glume apex acute. Upper glume lanceolate, 6–7.8 mm long, 0.66 length of adjacent fertile lemma, membranous, without keels, 9–11 -veined. Upper glume surface pubescent. Upper glume apex acute, mucronate or awned, 1 -awned, awn 0.4–0.5 mm long.

**Florets.** Fertile florets decreasing in size upwards. Fertile lemma lanceolate, 9.1–11.6 mm long, 1.5–2.1 mm wide, chartaceous, without keel, 9–15 -veined, more than 3-veined. Lemma surface puberulous. Lemma apex acute, awned, 1 -awned. Principal lemma awn 1–4.7 mm long overall. Palea elliptic, 8–11 mm long, 1 length of lemma. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 3, 1–1.3 mm long, veined, ciliate. Anthers 3, 4.5 mm long, yellow or brown. Caryopsis with adherent pericarp, oblong, 4.3–5.9 mm long. Embryo 0.66 length of caryopsis. Hilum linear, 1 length of caryopsis.
**Distribution (TDWG).** Continent. South America. Country /Province /State. Western South America.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *seta*, bristle; *gero*, carry. With hairs or awns on the glumes or lemmas.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 5–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 40–50 mm long, 3 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3 mm long, scaberulous, glabrous.

**Glumes.** Glumes several, 4 empty glumes, persistent, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 3–4 mm long, membranous, without keels, 3–5 -veined. Lower glume apex acute, mucronate. Upper glume ovate, 5–7 mm long, membranous, without keels, 5–7 -veined. Upper glume apex acute, mucronate.

**Florets.** Fertile lemma lanceolate, 6–7 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma apex obtuse, mucronate, 1 -awned. Principal lemma awn 3–5 mm long overall. Palea 1 length of lemma. Palea keels ciliolate.

**Flower and Fruit.** Lodicules 3, ciliate. Anthers 3, 6 mm long. Stigmas 2. Caryopsis with adherent pericarp.


**Illustrations (Journals):** *Systematic Botany* (27, 720, Fig.7 (2002)), *Brittonia* (63: 105, Fig.1 (2011)).


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.
Habit, Vegetative Morphology. Perennial, woody bamboo. Butt sheaths absent. Culms scandent, 700–800 cm long, 20–35 mm diam., woody. Culm-internodes terete, thick-walled, yellow or glaucous, distally pubescent. Culm-nodes without obvious supra-nodal ridge. Lateral branches dendroid. Branch complement three or several, with 1 branch dominant. Culm-sheaths present, tardily deciduous, 11–28 cm long, 1.3–2 times as long as wide, coriaceous, pubescent, hairy on margins, auriculate, with 5–14 mm high auricles, with 1.5–4 mm wide auricles, setose on shoulders, shoulders with 3–6 mm long hairs. Culm-sheath ligule 1–2.5 mm high. Culm-sheath blade triangular, 7–20 cm long, 15–30 mm wide, pubescent. Leaves cauline, 7–23 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking or setose, 6–12 mm long. Leaf-sheath auricles absent or falcate, 5–14 mm long. Ligule an eciliate membrane or a ciliolate membrane, 1.5–3 mm long, glabrous on abaxial surface or pubescent on abaxial surface, entire (asymmetrical). Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3–0.5 cm long, petiole glabrous. Leaf-blades deciduous at the ligule, lanceolate or ovate, 6–20 cm long, 8–21 mm wide, glaucous and dark green, variegated (green margins). Leaf-blade venation with 7–13 secondary veins. Leaf-blade surface glabrous. Leaf-blade apex filiform. Flowering specimens unknown.

Distribution (TDWG). Continent. South America.

Country/Province/State. Brazil. Brazil Southeast.

Sao Paulo.


Illustrations: None found.


Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Fertile Spikelets. Spikelets comprising 5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 30 mm long, 3 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 4 mm long, membranous, without keels, 5 -veined. Upper glume lanceolate, 7 mm long, membranous, without keels, 7 -veined. Upper glume surface scabrous. Upper glume apex acuminate, awned, 1 -awned, awn 2 mm long.

Florets. Fertile lemma lanceolate, 10–12 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex acute, awned, 1 -awned. Principal lemma awn 4 mm long overall. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.


Distribution (TDWG). Continent. South America.

Country/Province/State. Western South America. Ecuador.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *sub,* approaching; *pecten,* comb; -*ata,* possessing. With setose fimbrae on the margins of the leaf-sheath.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3 mm long, membranous, without keels. Lower glume apex acute. Upper glume lanceolate, 5 mm long, membranous, without keels. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 7–8 mm long, chartaceous, without keel, more than 3-veined. Lemma surface puberulous. Lemma apex obtuse.


**TYPE** from Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Bolivia, Nor Yungas: Beck 5361 (LPB holo, K).

**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (34, Fig. 3).

**Derivation** (Clifford & Bostock 2007): L. trembling. Inflorescence subject to movement in a slight breeze.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Fertile Spikelets.** Spikelets comprising 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 10–20 mm long, 0.5–1 mm wide, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5–1.5 mm long, membranous, without keels, 1-veined. Lower glume lateral veins absent. Lower glume surface pubescent, hairy at apex. Lower glume apex obtuse. Upper glume ovate, 2–3 mm long, membranous, without keels, 3–5-veined. Upper glume surface pubescent, hairy at apex. Upper glume apex obtuse.

**Florets.** Fertile lemma oblong, 5.5–6.5 mm long, herbaceous, purple, without keel, 5-veined, more than 3-veined. Lemma apex acute. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.


**Distribution (TDWG).** Continent: South America.

**Country/Province/State.** Western South America. Bolivia.


**Illustrations:** None found.


**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence a panicle. Panicle open, 10–13 cm long. Primary panicle branches reflexed, 7.5 cm long. Panicle branches with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 1.5 mm long, membranous, without keels, 1-veined. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume lanceolate, 3 mm long, membranous, 1-keeled, 5-veined. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 6 mm long, chartaceous, without keel, 7-veined, more than 3-veined. Lemma surface glabrous or hirsute, hairy at base. Lemma apex acute, mucronate.


**Distribution (TDWG).** Continent: South America.

**Country/Province/State.** Western South America. Colombia.


**TYPE** from Brazil. **Basionym or Replaced Name:** Arundinaria ulei Hack., Oesterr. Bot. Z. 53(2): 75 (1903).


**Illustrations (Books):** L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (123, Fig. 26).


**Derivation** (Clifford & Bostock 2007): in honor of Ernst Heinrich Georg Ule (1854–1915) German botanist sometime resident in Brazil.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.


**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 8–15 cm long. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1–3 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 18–22 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes two or several, 2–3 empty glumes, persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 7 mm long, 0.75 length of upper glume, membranous, without keels. Lower glume apex acute, awned, 1 -awned, awn 5 mm long. Upper glume lanceolate, 10 mm long, membranous, without keels. Upper glume apex acute, awned, 1 -awned, aawn 3 mm long.

**Florets.** Fertile lemma lanceolate, 12 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn 3 mm long overall. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.


**Illustrations (Books):** W.Burger, *Flora Costaricensis* 15, Gramineae: Fieldiana Botany New Series 4 (1980) (70, Fig. 18).

**Derivation** (Clifford & Bostock 2007): L. sticky. Panicle-branches or foliage sticky.

**Classification.** Subfamily Bambusoideae. Tribe: Bambuseae.
Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect or scandent, 400–500 cm long, 5–15 mm diam., woody. Culm-internodes terete, thin-walled, mid-green or purple, mottled, distally glabrous. Culm-nodes without obvious supra-nodal ridge, viscid. Lateral branches dendroid. Bud complement 1. Branch complement one, solitary, as thick as stem. Culm-sheaths present, persistent, green or purple, distinctly mottled with last colour. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 1–2.5 mm long. Collar with external ligule. Leaf-blade base broadly rounded, asymmetrical, with a brief petiole-like connection to sheath, petiole 0.5–0.7 cm long, petiole glabrous (viscid). Leaf-blades ovate, 21–26 cm long, 40–50 mm wide, dark green or glaucous (above/below), discolorous with last colour beneath. Leaf-blade venation without cross veins. Leaf-blade surface scaberulous, rough abaxially. Leaf-blade apex acuminate.


Fertile Spikelets. Spikelets comprising 3–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 15–25 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3–5 mm long, 0.5 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 7–9 mm long, 0.5 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Fertile lemma ovate, 13–14 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma apex obtuse. Palea 1 length of lemma. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.


Distribution (TDWG). Continent. South America.


Illustrations (Journals): Novon (22 (3): 373, Fig. 1 (2013)).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 200–500 cm long, 3–6(–10) mm diam., woody. Culm-internodes terete, thick-walled, 10–26 cm long, distally hispid (above). Culm-nodes without obvious supra-nodal ridge. Lateral branches dendroid, intravaginal. Bud complement 1. Culm-sheaths present, tardily deciduous, 10–18 cm long, 4–8 times as long as wide, glabrous or hispid, hairy on margins, setose on shoulders, shoulders with 7–15 mm long hairs. Culm-sheath blade lanceolate, constricted at base, deciduous, reflexed, 3–10 cm long, 8–25 mm wide. Leaf-sheaths striately veined, glabrous on surface or pubescent, outer margin hairy. Leaf-sheath oral hairs setose, curly, 7–15 mm long. Ligule an eciliate membrane, 0.5 mm long. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2–0.5 cm long, petiole pubescent. Leaf-blades reflexed, lanceolate, 8–17 cm long, 10–28 mm wide. Leaf-blade surface glabrous or puberulous, hairy abaxially. Leaf-blade margins scabrous.

Fertile Spikelets. Spikelets comprising (4–)5(–9) fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear or oblong, laterally compressed, 13–36 mm long, 3–5.5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 4–5.5 mm long, membranous, without keels, 1–3(–5) -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume lanceolate, 6–8.5 mm long, membranous, without keels, 3–5(–7) -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate, 8–12.5 mm long, chartaceous, without keel, 7–11 -veined, more than 3-veined. Lemma apex acute, muticous or awned, 1 -awned. Principal lemma awn 1.5–3(–5) mm long overall. Palea 1 length of lemma, 2-keeled. Palea keels winged (above), narrowly winged, scabrous. Palea surface scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, obovate, 1–1.4 mm long, veined, ciliate. Anthers 3, 3–4 mm long, purple. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America and Western South America. Venezuela, Colombia.


Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.


Fertile Spikelets. Spikelets comprising (4–)5(–7–8) fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 20–37 mm long, 1–2 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 4.5–5.8 mm long.

Glumes. Glumes persistent, shorter than spikelet. Lower glume lanceolate or ovate, 2.5–3 mm long, 0.66–0.75 length of upper glume, membranous, without keels, 7 -veined. Lower glume surface puberulous. Lower glume apex acute. Upper glume lanceolate, (3–)3.8–4.5 mm long, 0.5–0.66 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 6.5–8.5 mm long, chartaceous, without keel, (7–9) -veined, more than 3-veined. Lemma surface puberulous. Lemma apex acute. Palea 6.5–8.5 mm long, 1.1 length of lemma. Palea keels 0.8–1 mm apart, ciliolate. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.


Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online.

**Illustrations:** None found.
**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Basal innovations intravaginal. Culms geniculately ascending, 17–60 cm long, 3 -noded. Culm-nodes swollen, brown or black. Leaf-sheaths 2.5–5 cm long, glabrous on surface or pubescent, with reflexed hairs. Leaf-sheath oral hairs lacking. Leaf-sheath auricles falcate, 0.1–0.5 mm long. Ligule an eciliate membrane, 0.6–1.25 mm long, lacerate. Collar dark, glabrous. Leaf-blades 6–25 cm long, 0.5–3.5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence composed of racemes. Peduncle glabrous or pubescent above, tipped by a glumaceous appendage. Racemes 1, single, bilateral, 3–13 cm long, bearing 4–13 fertile spikelets on each. Rachis glabrous on surface or woolly on surface, scabrous on margins. Spikelet packing broadside to rachis, distant, regular, 2 -rowed. Spikelets ascending or spreading, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes 1–1.25 mm long, pubescent. Floret callus 0.25–0.4 mm long, pubescent, disarticulating obliquely.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume linear, 2.5–4 mm long, 0.66–0.75 length of upper glume, coriaceous, 1-keeled, 3–5 -veined. Lower glume primary vein scabrous. Lower glume apex acuminately. Upper glume lanceolate, 3.7–5.5 mm long, 0.4–0.5 length of adjacent fertile lemma, coriaceous, 1-keeled, 3–5 -veined. Upper glume primary vein scabrous. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic, 7–8 mm long, chartaceous, keeled, keeled above, 5 -veined, more than 3-veined. Lemma midvein scabrous. Lemma apex acuminate. Upper lemma awned, 1 -awned. Principal lemma awn 1.5–4 mm long overall. Palea 5.3–7 mm long. Palea keels scabrous. Palea surface puberulous, hairy on back or on margins. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, 0.4–0.6 mm long, ciliate. Anthers 3, 2.4–2.75 mm long. Ovary pubescent on apex. Caryopsis with adherent pericarp, 3.5–4 mm long, hairy at apex. Embryo 0.2 length of caryopsis. Hilum linear, 0.75–1 length of caryopsis.


**Derivation** (Clifford & Bostock 2007): L. pecten, comb; -ata, possessing. Inflorescence with spikes or racemes bearing a fanciful resemblance to a comb.
**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 15–60 cm long. Culm-internodes distally pubescent, with reflexed hairs. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane, 0.5 mm long, entire or erose. Leaf-blades 3–20 cm long, 1–4 mm wide, coriaceous, stiff. Leaf-blade surface scaberulous, rough abaxially, puberulous or hirsute, hairy adaxially.

**Inflorescence.** Inflorescence composed of racemes. Racemes 1, single, oblong, bilateral, 1.5–8 cm long, bearing 4–10 fertile spikelets on each. Rhachis pubescent on surface (antrorsely). Spikelet packing broadside to rhachis, distant, 3 spikelets per cm, regular, 2 -rowed. Rhachis internodes oblong. Spikelets spreading or deflexed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 3–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or cuneate, laterally compressed, 10–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus 0.5 mm long.

**Glumes.** Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma, gaping. Lower glume linear, 4–7 mm long, 0.8 length of upper glume, coriaceous, 1-keeled, 3 -veined. Lower glume surface asperulous. Upper glume lanceolate, 5–7 mm long, 0.75–1 length of adjacent fertile lemma, coriaceous, 1-keeled, 5–7 -veined. Upper glume surface asperulous. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic or ovate, 5–11 mm long, chartaceous, keeled, 5–7 -veined, more than 3-veined. Lemma surface asperulous, pubescent. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 2–3 mm long overall. Palea 4–6.5 mm long. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 3, 1.5 mm long. Ovary pubescent on apex. Caryopsis with adherent pericarp, hairy at apex. Hilum linear.

**2n = 14 (1 ref TROPICOS).**

**Distribution (TDWG).** Continent Australasia.

**Country /Province /State.** Australia, New Zealand (*). New South Wales, Queensland, Tasmania, Victoria. New Zealand North I, New Zealand South I.

South East. Tablelands, Western Slopes.


**Derivation** (Clifford & Bostock 2007): L. retro, backwards; fractus, broken. With retrorse hairs on the rhachis.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 20–35 cm long, 2–3 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5 mm long, truncate. Leaf-blades flat or involute, 5–15 cm long, 1–2 mm wide, grey-green. Leaf-blade surface ribbed, scabrous, pubescent.

**Inflorescence.** Inflorescence composed of racemes. Peduncle hirsute above. Racemes 1, single, bilateral, 1.5–6 cm long, bearing 4–10 fertile spikelets on each. Rhachis pubescent on surface. Spikelet packing broadside to rhachis, contiguous. Rhachis internodes oblong. Spikelets ascending, solitary. Fertile spikelets sessile.
**Fertile Spikelets.** Spikelets comprising 5–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–20 mm long, breaking up at maturity, disarticulating below each fertile floret.

**Glumes.** Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture, gaping. Lower glume lanceolate, 6–7 mm long, 1 length of upper glume, coriaceous, 1-keeled, keeled all along, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 5–7 mm long, 0.66–0.75 length of adjacent fertile lemma, coriaceous, 1-keeled, 7 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma ovate, 9–10 mm long, coriaceous, keeled, keeled above, 5–7 -veined, more than 3-veined. Lemma surface asperulous, rough above. Lemma apex acuminate, mucronate or awned, 1 -awned. Principal lemma awn 0.5–3 mm long overall. Palea 6–7 mm long. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Anthers 3, 2.5 mm long. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, linear, hairy at apex, apex fleshy. Hilum linear. 2n = 14 (1 ref TROPICOS).


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online (as Agropyron), U.Quattrocchi, CRC World Dictionary of Grasses (2006), J.F.Veldkamp, Poaceae ms (Flora Malesiana).

**Basionym or Replaced Name:** Agropyron uncinatum.

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. uncinus, hook; -ata, possessing. Upper glume drawn out into a hook.

**Classification.** Subfamily Pooideae. Tribe: Triticeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Basal innovations intravaginal. Culms erect, 30–80 cm long. Culm-internodes distally glabrous. Culm-nodes pallid or brown. Lateral branches lacking. Leaf-sheaths pubescent or pilose. Ligule an eciliate membrane, 0.5–1 mm long, erose. Leaf-blades involute, 12–25 cm long, 1–2 mm wide. Leaf-blade surface pilose, hairy on both sides.

**Inflorescence.** Inflorescence composed of racemes. Peduncle 10–25 cm long, pubescent above. Racemes 1, single, bilateral, 2–3 cm long, bearing few fertile spikelets, bearing 3–5 fertile spikelets on each. Rhachis flattened, pubescent, pubescent on surface, terminating in a barren extension, extension bristle-like, extension 5–6 mm long. Spikelet packing broadside to rhachis. Rhachis internodes linear. Spikelets appressed (anthesis) or spreading to deflexed (fruiting), solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 1 mm long, pubescent.

**Fertile Spikelets.** Spikelets comprising 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 15–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5–1 mm long, pubescent. Floret callus glabrous, disarticulating obliquely.

**Glumes.** Glumes persistent, similar, shorter than spikelet. Lower glume linear, 7–9 mm long, 1 length of upper glume, coriaceous, 1-keeled, 3 -veined. Lower glume apex acuminate, muticous or awned, 1 -awned, awn 0.5 mm long, awn hooked. Upper glume linear, 7.7–8 mm long, 0.5–0.66 length of adjacent fertile lemma, coriaceous, 1-keeled, 3–5 -veined. Upper glume apex acuminate, muticous or awned, 1 -awned, awn 0.5 mm long (hooked).

**Florets.** Fertile lemma lanceolate, 12–15 mm long, coriaceous, keeled, 10–14 -veined, more than 3-veined. Lemma lateral veins more or less parallel. Lemma surface pubescent. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn hooked, 1 mm long overall. Palea 7.5–10 mm long. Palea keels ciliate. Palea surface pubescent, hairy on back or on flanks. Apical sterile florets resembling fertile though underdeveloped.
Flower and Fruit. Lodicules 2, membranous. Anthers 3, 2–2.5 mm long, retained within floret. Stigmas 2. Caryopsis with adherent pericarp.


Fertile Spikelets. Spikelets comprising 6–10 fertile florets, with diminished florets at the apex. Spikelets 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume ovate, 5–6 mm long, 1 length of upper glume, coriaceous, 1-keeled, keeled all along, 7 -veined. Lower glume apex acuminate. Upper glume ovate, 5–6 mm long, 1 length of adjacent fertile lemma, coriaceous, 1-keeled, 9 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 5–7 mm long, coriaceous, keeled, keeled above, 5 -veined, more than 3-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn 1–2 mm long overall. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, hairy at apex, apex fleshy. Hilum linear.


Illustrations (Journals): Austral. J. Bot. (Suppl. 5: 36, Fig.14 (1972)).

**Derivation** (Clifford & Bostock 2007): Gk. *-oides*, resembling. Similar to *Dichanthium*.

**Classification.** Subfamily Chloridoideae. Tribe: Cynodonteae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50–100 cm long, 4–7 -noded. Leaves cauline. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades 5–12 cm long, 3 mm wide. Leaf-blade midrib evident.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, dorsally compressed, 4.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

**Glumes.** Glumes lower persistent, upper deciduous, dissimilar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume linear, 4.5–5 mm long, 1 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 4.5–5 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

**Florets.** Fertile lemma ovate, dorsally compressed, 2.5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma midvein pubescent, hairy above. Lemma margins ciliate, hairy above. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn 1.5–3 mm long overall. Apical sterile florets 1 in number, barren, oblong. Apical sterile lemmas winged on margins (above).

**Flower and Fruit.** Anthers 3, 0.5 mm long. Caryopsis with free soft pericarp, ellipsoid, dorsally compressed, biconvex.

**Distribution (TDWG).** Continent: Australasia.

**Country /Province /State.** Australia. Queensland.


**TYPE from New Zealand.** Basionym or Replaced Name: *Arundo fulvida* Buchanan *Trans. & Proc. New Zealand Inst.* 6: 242 (1874).


**Illustrations:** None found.


**Classification.** Subfamily Danthonioideae. Tribe: Danthonieae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms robust, 150–250 cm long. Ligule a fringe of hairs. Leaf-blades 75–100 cm long, 10–15 mm wide, coriaceous, stiff. Leaf-blade margins scabrous. Gynodioecious ("male", in this context, indicating the bisexual state).


**Fertile Spikelets.** Spikelets comprising 1–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 10–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

**Glumes.** Glumes similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume linear, 10–20 mm long, 1 length of upper glume, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex setaceously acuminate. Upper glume linear, 10–20 mm long, 1.5 length of adjacent fertile lemma, hyaline, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

**Florets.** Fertile florets female. Fertile lemma lanceolate, 7–13 mm long, hyaline, shiny, without keel, 3 -veined, 0–3 -veined. Lemma surface plumose, hairy below. Lemma hairs 5 mm long. Lemma apex entire.
or lobed, 2 -fied, with filiform lobes, with lobes 0–3 mm long, attenuate, awned, 1 -awned. Principal lemma awn apical or from a sinus, 2–7 mm long overall. Palea hyaline, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy, ciliate. Anthers 3, 2 mm long. Caryopsis with adherent pericarp.

Male inflorescence bisexual similar to female, a panicle. Male spikelets resembling female.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** New Zealand. New Zealand North I, New Zealand South I.


**Classification.** Subfamily Danthonioideae. Tribe: Danthonieae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms robust, 200–300 cm long. Ligule a fringe of hairs. Leaf-blades 60–80 cm long, 5–10 mm wide, coriaceous, stiff. Leaf-blade surface glabrous, hairless throughout. Gynodioecious (“male”, in this context, indicating the bisexual state).


**Fertile Spikelets.** Spikelets comprising 3–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 20–35 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

**Glumes.** Glumes similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume linear, 20–35 mm long, 1 length of upper glume, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex setaceously acuminate. Upper glume linear, 20–35 mm long, 3 length of adjacent fertile lemma, hyaline, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

**Florets.** Fertile florets female. Fertile lemma lanceolate, 6–15 mm long, 1–3 mm wide, hyaline, shiny, without keel, 3 -veined, 0–3 -veined. Lemma surface plumose, hairy below. Lemma hairs 6–8 mm long. Lemma apex lobed, 2 -fied, with filiform lobes, with lobes 3–7 mm long, attenuate, awned, 1 -awned. Principal lemma awn from a sinus, 8–10 mm long overall. Palea hyaline, 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy, ciliate. Anthers 3, 2–2.2 mm long. Caryopsis with adherent pericarp, fusiform, 2.5 mm long. Embryo 0.3 length of caryopsis.

Male inflorescence bisexual similar to female, a panicle. Male spikelets resembling female.

**Distribution (TDWG).** Continent. Australasia (*). 

**Country /Province /State.** Australia (*), New Zealand (*). Tasmania (*). New Zealand South I.


TYPE from New Zealand. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database:
HT: R. Bell s.n., 20 Dec 1967, New Zealand: Ruapuke Beach (CHR-184354).
Illustrations: None found.
Classification. Subfamily Danthonioideae. Tribe: Danthonieae.
Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms robust, 300–600 cm long. Leaf-sheaths glabrous on surface or pilose, outer margin glabrous or hairy. Ligule a fringe of hairs. Leaf-blades 200–300 cm long, 30–50 mm wide, firm. Leaf-blade surface scaberulous. Leaf-blade margins scaberulous. Gynodioecious ("male", in this context, indicating the bisexual state).
Fertile Spikelets. Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 22–50 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.
Florets. Fertile florets female. Fertile lemma lanceolate, 10 mm long, hyaline, shiny, without keel, 3 -veined, 0–3 -veined. Lemma surface plumose, hairy below. Lemma hairs 10 mm long. Lemma apex lobed, 2 -fid, with filiform lobes, with lobes 4–7 mm long, attenuate, awned, 1 -awned. Principal lemma awn from a sinus, 10–15 mm long overall. Palea 6–9 mm long, hyaline, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.
Male inflorescence bisexual similar to female, a panicle. Male spikelets resembling female.
The Encyclopaedia of Grasses for Liveable Landscapes (2007).
Country /Province /State. New Zealand. New Zealand North I.

TYPE from New Zealand. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database:
Illustrations: None found.
Images: R.Darke, The Encyclopaedia of Grasses for Liveable Landscapes (2007).:
Derivation (Clifford & Bostock 2007): Maori, to divide into strips. Maori vernacular name for several grasses.
Classification. Subfamily Danthonioideae. Tribe: Danthonieae.
Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms robust, 400–600 cm long. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades 200–300 cm long, 10–30 mm wide, stiff. Leaf-blade surface scabrous, glabrous, hairless except near base. Leaf-blade margins scabrous. Gynodioecious ("male", in this context, indicating the bisexual state).
Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 15–24 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.
Glumes. Glumes similar, exceeding apex of florets, similar to fertile lemma in texture, shiny, gaping. Lower glume linear, 15–24 mm long, 1 length of upper glume, hyaline, without keels, 1 -veined. Lower

**Florets.** Fertile florets female. Fertile lemma lanceolate, 8–9 mm long, hyaline, shiny, without keel, 3 -veined, 0–3 -veined. Lemma surface plumose, hairy below. Lemma hairs 8–9 mm long. Lemma apex lobed, 2 -fid, with filiform lobes, with lobes 3–7 mm long, attenuate, awned, 1 -awned. Principal lemma awn from a sinus, 10 mm long overall. Palea 5–6.5 mm long, hyaline, 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, cuneate, fleshy, ciliate. Anthers 3, 2–4 mm long. Caryopsis with adherent pericarp.

**Male** inflorescence bisexual similar to female, a panicle. Male spikelets resembling female.

**Distribution (TDWG).** Continent Australasia.

**Country /Province /State.** Australia (*), New Zealand. New Zealand North I.


**Illustrations:** None found.


**Classification.** Subfamily Danthonioideae. Tribe: Danthonieae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms robust, 100–200 cm long. Leaf-sheaths hirsute. Ligule a fringe of hairs. Leaf-blades 5–10 mm wide, firm. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade margins scaberulous.


**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.


**Florets.** Fertile lemma lanceolate, 5–7 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma surface hirsute. Lemma apex lobed, 2 -fid, with lobes 0.5–1 mm long. Palea 5–7 mm long, hyaline, 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

**Flower and Fruit.** Lodicules 2, fleshy. Anthers 3, 2–5 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent Australasia.

**Country /Province /State.** New Zealand. Chatham Is.


Derivation (Clifford & Bostock 2007): Gk. akros, at the tip; L. cilium, hair; -ata, possessing. Glume apices hairy.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1.5 mm long, pubescent, puncgent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume oblong, 7–10 mm long, 1.2–1.3 length of upper glume, membranous, much thinner above, without keels, 3 -veined. Lower glume lateral veins all extending to apex. Lower glume margins ciliate. Lower glume apex obtuse. Upper glume oblong, 6–8 mm long, membranous, with hyaline margins, without keels, 3 -veined. Upper glume lateral veins all extending to apex. Upper glume margins ciliate. Upper glume apex obtuse.

Florets. Fertile lemma lanceolate, subterete, 5–6 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, limb subterete below, 60–80 mm long overall, with twisted column. Column of lemma awn 7–10 mm long, glabrous. Palea 1 length of lemma, without keels.

Flower and Fruit. Stigmas 2.


Country /Province /State. Australia. New South Wales, South Australia, Victoria, Western Australia. Eremean, South-West. Southern. Western Plains.


Derivation (Clifford & Bostock 2007): Gk. a-, without; phyllos, leaf. The leaves lack blades.


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, slender, 50–90 cm long, 0.5–1 mm diam., 3–4 -noded. Culm-nodes pubescent. Leaf-sheaths deciduous, leaf-sheaths deciduous, 0.4–1.8 cm long, glabrous on surface. Ligule a ciliate membrane, 0.1 mm long. Leaf-blades deciduous at the ligule (when inflorescence emerges), involute, 2–4.5 cm long, 1 mm wide, stiff. Leaf-blade surface ribbed.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 13.5–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.6–2.5 mm long, pubescent, pungent.
**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume linear, 13.5–15 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex attenuate. Upper glume linear, 12.5–15 mm long, membranous, without keels, 3–5 -veined. Upper glume apex attenuate.

**Florets.** Fertile lemma linear, subterete, 8–11 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface papillose, pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 60–70 mm long overall, with twisted column, limb puberulous. Column of lemma awn 40–51 mm long, puberulous. Palea 5.2–7 mm long, 0.8–1 length of lemma, without keels. Palea surface puberulous.

**Flower and Fruit.** Lodicules 3, 1.5 mm long. Anthers 3, 2.5–5.1 mm long. Stigmas 2.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Tasmania.


**Images:** D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

**Derivation** (Clifford & Bostock 2007): L. aquarius, water man. From the Waterhouse Range, Northern Territory, Australia.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms 50–100 cm long, 1.5 mm diam., 5–6 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths antrorsely scabrous, glabrous on surface or hirsute, outer margin glabrous or hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 1–2 mm long, pubescent on abaxial surface, obtuse. Leaf-blades convolute, 30–60 cm long, 1–2 mm wide. Leaf-blade surface ribbed, scabrous, rough abaxially, pubescent, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without Rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, curved, 1 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–12 mm long, 1 length of upper glume, hyaline, without keels, 3 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate. Upper glume lanceolate, 9–10 mm long, hyaline, without keels, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 3.5–5 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough above, pilose, hairy below. Lemma margins convolute, covering most of palea. Lemma hairs yellow. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 40–50 mm long overall, with twisted column, limb limb ciliate, glabrescent towards tip. Middle segment of lemma awn 3–4 mm long, hirtellous. Column of lemma awn 7–9 mm long, hirtellous, with 0.8–1.3 mm long hairs. Palea 0.9 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Lodicules 2, 0.7 mm long. Anthers 3, 0.8 mm long, anther tip smooth. Stigmas 2.

**Caryopsis with adherent pericarp. Hilum linear.**

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Northern Territory.

Central Australia.


**Images:** D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

**Derivation** (Clifford & Bostock 2007): L. *arista*, bristle; *gluma*, husk. With awned subtending glumes or lemma.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 100–200 cm long, 2.5 mm diam., 3-noded. Culm-internodes distally glabrous or pubescent. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths ribbed, smooth or scaberulous, outer margin hairy. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 0.8–3 mm long, truncate or obtuse. Leaf-blades flat or convolute, 20–40 cm long, 3–6 mm wide. Leaf-blade surface smooth or scaberulous, rough adaxially or on both sides.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4–1 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume oblong, 8–14 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface smooth or asperulous, rough generally or on veins. Lower glume apex attenuate or setaceous acuminate. Upper glume oblong, 6–12 mm long, membranous, without keels, 5 -veined. Upper glume surface smooth or asperulous, rough generally or on veins. Upper glume apex attenuate or setaceous acuminate.

**Florets.** Fertile lemma elliptic, subterete, 4–7.5 mm long, coriaceous, light brown or dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma hairs yellow. Lemma apex surmounted by a ring of hairs, awned, 1 -awned. Principal lemma awn bigeniculate, 25–40 mm long overall, with twisted column. Middle segment of lemma awn 6–8 mm long. Column of lemma awn 4–9 mm long. Palea 1 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Lodicles 3, 0.5–1.8 mm long. Anthers 3, 2–3 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 3–4.5 mm long. Embryo 0.33–0.5 length of caryopsis. Hilum linear, 0.75–0.9 length of caryopsis.

**Distribution (TDWG).** Continent: Europe (*), Australasia. Region: Northern Europe (*).


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Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths pubescent. Culms erect, 20–50 cm long, 2–4 -noded. Culm-nodes pubescent. Leaf-sheaths 1.5–3 cm long, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.4–0.5 mm long. Leaf-blades filiform, convolute, 20–45 cm long, 1–2 mm wide. Leaf-blade surface ribbed, scabrous, rough adaxially, glabrous. Leaf-blade apex pungent.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.7–3 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 15–20 mm long, 1.1–1.4 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 13–14 mm long, membranous, without keels, 5 -veined. Upper glume surface puberulous, hairy above. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, suberete, 7.3–10.5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface scaberulous, rough above, pubescent. Lemma margins convolute, covering most of palea. Lemma hairs yellow or tawny. Lemma apex surmounted by a ring of hairs, with this appendage 2.2–4.4 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 40–50 mm long overall, with twisted column, limb puberulous. Column of lemma awn 20–25 mm long, puberulous. Palea 5–7 mm long, 0.9 length of lemma, without keels. Palea surface puberulous.

Flower and Fruit. Lodicules 3, 2.4 mm long. Anthers 3, 3.3–4.4 mm long. Stigmas 2.


Country /Province /State. Australia, New Zealand (*). New South Wales, A.C.T., Tasmania, Victoria. New Zealand South I.

Coast, Tablelands, Western Slopes, Western Plains.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 100 cm long, 1.5–2.5 mm diam., 3–4 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes swollen, pubescent. Lateral branches lacking. Leaf-sheaths scaberulous, pubescent, outer margin hairy. Leaf-sheath
oral hairs pubescent. Ligule a ciliolate membrane, 0.3–1.5 mm long, pubescent on abaxial surface, truncate. Leaf-blades flat or involute, 10–20 cm long, 2–5 mm wide. Leaf-blade surface ribbed, scabrous, rough on both sides, pubescent, hairy abaxially.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, 10–30 cm long, 2–6 cm wide. Primary panicle branches 2–8 cm long. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, terete or angular, 5–13 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1.2–2.3 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume oblong, 10–17 mm long, 1.2 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface smooth or scabrous. Lower glume margins eciliate or ciliate. Lower glume apex acuminate. Upper glume oblong, 8–15 mm long, membranous, without keels, 4–5 -veined. Upper glume surface smooth or asperulous. Upper glume apex acuminate.

**Florets.** Fertile lemma oblanceolate, subterete, gibbous, 5–7 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy on veins. Lemma margins convolute, covering most of palea. Lemma hairs yellow. Lemma apex scabrous, surmounted by a ring of hairs, with this appendage 2–3 mm long, awned, 1 -awned. Principal lemma awn bigenicate, 28–40 mm long overall, with twisted column. Middle segment of lemma awn 7–10 mm long. Column of lemma awn 6–10 mm long. Palea 1 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Lodicules 3. Anthers 3, 2.3–3.5 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 3.4–3.8 mm long. Embryo 0.33–0.5 length of caryopsis. Hilum linear, 0.9 length of caryopsis.

**Distribution (TDWG).** Continent. Europe (*), Australasia. Region. Northern Europe (*).

**Country /Province /State.** GB Aliens (Ryves et al). Australia, New Zealand (*). New South Wales, South Australia, Tasmania, Victoria, Western Australia. New Zealand South I.

South-West. Southern. Western Slopes, Western Plains.


**Classification.** Subfamily Pooidae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rootstock evident. Butt sheaths pubescent. Culms 30–100 cm long, 1–2 mm diam., 2–4 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes swollen, glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface or puberulous, outer margin glabrous or hairy. Leaf-sheath oral hairs scanty or lacking. Ligule a ciliolate membrane, 1–2.5 mm long, truncate. Leaf-blades involute, 15–28 cm long, 1.5–2 mm wide. Leaf-blade surface ribbed, pubescent, hairy abaxially or on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 20–35 cm long, 2–3 cm wide. Primary panicle branches 3–6 cm long. Panicle axis glabrous or puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flattened, 7–25 mm long, scaberulous.
**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 14–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, straight, 2.5–3 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 14–18 mm long, 1 length of upper glume, hyaline, without keels, 3 - veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 13–17 mm long, hyaline, without keels, 5 - veined. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma linear, subterete, 7–8 mm long, coriaceous, dark brown, without keel, 5 - veined, more than 3-veined. Lemma surface papillose, puberulous. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fId, with lobes 0.1–0.2 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, recurved at base of limb, 70–100 mm long overall, with twisted column. Column of lemma awn 9–13 mm long, pubescent, with 0.2–0.3 mm long hairs. Palea 1 length of lemma, 2 -veined, without keels. Palea surface puberulous, hairy on back.

**Flower and Fruit.** Lodicules 2, 2 mm long. Anthers 3, 3 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 4.5 mm long. Hilum linear.

**Distribution (TDWG).** Continent. Australasia.

**Country/Province/State.** Australia. Queensland. Central, Inland.


**Derivation** (Clifford & Bostock 2007): L. brevis, short; gluma, husk. One or both glumes short with respect to the length of the spikelet.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths distinctly ribbed. Culms erect or geniculately ascending, 150 cm long, 2.5 mm diam., 2–4 -noded. Culm-nodes swollen, glabrous. Lateral branches ample. Leaves cauleine. Leaf-sheaths loose or inflated, scaberulous, glabrous on surface. Ligule an eciliate membrane, 1–7 mm long, truncate. Leaf-blades flat or involute, 10–20 cm long, 2–2.5 mm wide. Leaf-blade surface ribbed, scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 20–40 cm long, 2–4 cm wide. Primary panicle branches 5–10 cm long. Panicle axis angular, glabrous or puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–6 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 0.5 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 5.5–6.5 mm long, 1 length of upper glume, hyaline, without keels. Lower glume surface puberulous. Lower glume apex acute or acuminate. Upper glume lanceolate, 4.5–6 mm long, hyaline, without keels, 3 - veined. Upper glume surface puberulous. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma linear, subterete, 3–4.5 mm long, coriaceous, without keel, 5 - veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs 0.2–0.4 mm long. Lemma apex with a short cylindrical neck or surmounted by a ring of hairs, with this appendage 0.2 mm long (as to hairs), awned, 1 -awned. Principal lemma awn geniculate or bigeniculate,
20–35 mm long overall, with twisted column. Middle segment of lemma awn 5–8 mm long. Column of lemma awn 5–6.5 mm long. Palea 0.5–0.6 length of lemma, 2 -veined, without keels.


**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. South Australia, Victoria. Southern.


**Illustrations:** None found.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial. Culms 90–150 cm long. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Leaf-sheath auricles erect. Ligule an eciliate membrane or absent, 0–1(–2) mm long. Leaf-blades erect, filiform, involute or convolute, 35–45 cm long, 0.5–0.8 mm wide, stiff. Leaf-blade surface ribbed, grooved adaxially, pubescent, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 11–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1.5–1.8 mm long, pubescent, acute. Floret callus hairs 0.4–1 mm long (tawny).

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 11–13 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanciolate, 11–12 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 7–8 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs tawny, 0.5–0.6 mm long. Lemma apex dentate, 2 -fid, with lobes 0.3–1 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 42–55 mm long overall, with twisted column. Middle segment of lemma awn 8–9 mm long. Column of lemma awn 11–12 mm long, puberulous, with 0.2–0.4 mm long hairs. Palea 1 length of lemma, without keels. Palea surface pubescent, hairy on back.

**Flower and Fruit.** Lodicules 3, ovate, 1–1.2 mm long. Anthers 3, 4.2–5 mm long, anther tip penicillate. Caryopsis with adherent pericarp, fusiform, 4.1–4.6 mm long. Embryo 0.25 length of caryopsis. Hilum linear, 0.75 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia. South-West.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.
**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 60–80 cm long, 1–2 mm diam., 4–5 -noded. Culm-internodes terete, distally pubescent. Culm-nodes swollen, pubescent. Leaf-sheaths tight, mostly shorter than adjacent culm internode, ribbed, pubescent to hirsute, outer margin hairy. Leaf-sheath auricles absent or erect. Ligule a ciliolate membrane, 0.3–0.6 mm long, truncate. Leaf-blades convolute, 15–35 cm long, 1.5–2 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially, pubescent to hirsute, hairy on both sides. Leaf-blade margins ciliate. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear or lanceolate, 10–20 cm long, 2–3 cm wide. Primary panicle branches 2–3 cm long. Panicle axis scaberulous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 2–10 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 14–23 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–2.5 mm long, pubescent, acute. Floret callus hairs 0.2–0.8 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 15–23 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume lanceolate, 14–18 mm long, membranous, without keels, 5 -veined. Upper glume surface scabrous. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 8–9 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent or pilose. Lemma margins convolute, covering most of palea. Lemma hairs 0.3–1 mm long. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 50–70 mm long overall, with twisted column, limb scaberulous. Middle segment of lemma aww 10 mm long. Column of lemma aww 20 mm long, pubescent to hirsute, with 0.3–1.6 mm long hairs. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Lodicles 2, 1.6–1.8 mm long. Anthers 3, 2.5–3.5 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 4–5 mm long. Embryo 0.2 length of caryopsis. Hilum linear, 0.8–1 length of caryopsis.

**Distribution (TDWG).** Continent: Australasia.

**Country /Province /State.** Australia. Western Australia.

**Eremaean.**


**Derivation** (Clifford & Bostock 2007): L. centrum, centre of a circle; -ale, pertaining to. From Central Australia.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Butt sheaths woolly. Basal innovations extravaginal. Culms 40–80 cm long, 1 mm diam., 4–5 -noded. Culm-internodes smooth. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths tight, glabrous on surface or puberulous. Ligule an eciliate membrane, 0.6–1 mm long, scarious, pubescent on abaxial surface, acute. Leaf-blades involute, 10–25 cm long, 1.5 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially. Leaf-blade margins smooth or scaberulous.

**Inflorescence.** Inflorescence a panicle, comprising 10–30 fertile spikelets. Panicle open, 10–20 cm long, 1–2.5 cm wide, bearing few spikelets. Primary panicle branches 1.5–4 cm long. Panicle axis

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 13–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume elliptic, 13–18 mm long, 1 length of upper glume, hyaline, without keels, 3 -veined. Lower glume surface puberulous, hairy below. Lower glume apex acuminate. Upper glume elliptic, 12–16 mm long, hyaline, without keels, 5 -veined. Upper glume surface puberulous, hairy below. Upper glume apex acuminate.

**Florets.** Fertile lemma oblanceolate, subterete, 5–9 mm long, coriaceous, light brown or dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface granulose, glabrous. Lemma margins convolute, covering most of palea. Lemma apex entire or dentate, 2 -fid, with lobes 0.3 mm long, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 50–60 mm long overall, with twisted column. Middle segment of lemma awn 7–12 mm long. Column of lemma awn 12–13 mm long, pubescent, with 0.25–0.4 mm long hairs. Palea 0.9 length of lemma, 2 -veined, without keels. Palea surface puberulous, hairy on back.

**Flower and Fruit.** Lodicules 2 or 3, 1 mm long. Anthers 3, 0.8–1.5 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent. Australasia.
- Country /Province /State. Australia. Northern Territory.
- Central Australia.


**TYPE** from Australia. *Basionym or Replaced Name:* *Stipa compressa* R.Br, *Prodr.* 175 (1810).


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Butt sheaths glabrous. Culms 20–45 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 10 mm long, erose or bilobed or trilobed. Leaf-blades filiform or linear, involute, 1–2 mm wide, firm.

**Inflorescence.** Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, 20 cm long. Primary panicle branches whorled at most nodes. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 10–15 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 13 mm long, 1.5 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 9 mm long, membranous, without keels, 3–5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 7–8 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 70–170 mm long overall, with twisted column, limb pubescent. Column of lemma awn pubescent. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG).** Continent. Australasia.
- Country /Province /State. Australia. Western Australia.
Eremean, South-West.


**Derivation** (Clifford & Bostock 2007): L. with long hair. Hair as of leaf-blades or awns invested in long weak hairs.

**Classification**. Subfamily Pooideae. Tribe: Stipeae.


**Fertile Spikelets**. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, pungent.

**Glumes**. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, much thinner above, without keels, 3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins obscure. Lower glume apex acuminate. Upper glume lanceolate, 12 mm long, membranous, with hyaline margins, without keels, 5 -veined. Upper glume apex acuminata.

**Florets**. Fertile lemma lanceolate, subterete, 5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, ascending (straight), 40 mm long overall, with twisted column. Column of lemma awn 11 mm long, glabrous. Palea 1 length of lemma, without keels.

**Flower and Fruit**. Stigmas 2.

**Distribution (TDWG)**. Continent: Australasia.

**Country/Province/State**. Australia. Western Australia.

Eremean.


**Derivation** (Clifford & Bostock 2007): L. curtus, short; coma, hair-tuft. With a short tuft of hairs at the apex of the lemma.

**Classification**. Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology**. Perennial, caespitose. Culms 60–120 cm long, 2–3 mm diam., 3–4 -noded. Culm-internodes distally glabrous. Culm-nodes swollen, pubescent. Lateral branches lacking. Leaf-sheaths glabrous on surface or puberulous, outer margin hairy. Leaf-sheath oral hairs ciliate, 1 mm long. Ligule a ciliolate membrane, 0.5–1.5 mm long, pubescent on abaxial surface, truncate. Leaf-blades flat or involute, 15–30 cm long, 3–5 mm wide. Leaf-blade surface ribbed, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 12–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1.5–2.5 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume oblong, 12–16 mm long, 1.1–1.3 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface asperulous, rough generally or on veins. Lower glume apex acuminate. Upper glume oblong, 9–14 mm long, membranous, without keels, 5 -veined. Upper glume surface asperulous, rough generally or on veins. Upper glume apex acuminate.

Florets. Fertile lemma oblong, subterete, 6.5–8 mm long, coriaceous, dark brown or black, without keel, 5 -veined, more than 3-veined. Lemma surface granulose, pilose. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 0.1–0.5 mm long, with a short cylindrical neck or surmounted by a ring of hairs, with this appendage 0.5–1 mm long (as to hairs), awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 45–65 mm long overall, with twisted column. Middle segment of lemma awn 9–14 mm long. Column of lemma awn 9–11 mm long, pubescent, with 0.25–0.5 mm long hairs. Palea 1 length of lemma, 2 -veined, without keels.

Flower and Fruit. Lodicules 3, 1–2 mm long. Anthers 3, 3–3.5 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 4 mm long. Embryo 0.33 length of caryopsis. Hilum linear, 0.9 length of caryopsis.


Country /Province /State. Australia. South Australia, Victoria.

Southern.


Recent Synonyms: Stipa densiflora D.K.Hughes, Kew Bull. 1921, 18. (1921).


Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, elliptic or oblong, 10–20 cm long, 2–4 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 14–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3 mm long, pubescent, acute.

**Florets.** Fertile lemma lanceolate, subterete, 6 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma apex emarginate, awned, 1 -awned. Principal lemma awn geniculate, 30–38 mm long overall, with twisted column, limb hirsute, with 1 mm long hairs. Column of lemma awn 16–18 mm long, hirsute, with 1 mm long hairs. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG). Continent.** Australasia.

**Country /Province /State.** Australia. New South Wales, A.C.T., Queensland, South Australia, Tasmania.

Southern. South East. Coast, Tablelands, Western Slopes.


**Derivation** (Clifford & Bostock 2007): L. -cola, dweller. Growing in shallow gullies, that is dongas (from Zulu, udonga) in Western Australia.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Basal innovations extravaginal. Culms 100 cm long, 1.3–2.2 mm diam., 3–4 -noded. Culm-internodes distally pubescent. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths loose, glabrous on surface. Ligule an eciliate membrane, 0.8–1.5 mm long, pubescent on abaxial surface, truncate or obtuse. Leaf-blades straight or flexuous, flat or involute, 15–35 cm long, 3–4 mm wide. Leaf-blade surface pubescent, hairy on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, 14–30 cm long, 1–6 cm wide. Primary panicle branches 2–5 cm long. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–11 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 7–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume oblong, 7–12 mm long, 1 length of upper glume, membranous, purple, without keels, 3 -veined. Lower glume apex acuminate. Upper glume oblong, 8–11 mm long, membranous, purple, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma oblong, subterete, 5–6.5 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface scabrous, pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white or yellow. Lemma apex with a short cylindrical neck or surmounted by a ring of hairs, with this appendage 0.7 mm long (as to hairs), awned, 1 -awned. Principal lemma awn bigeniculate, 30–40 mm long overall, with twisted column. Middle segment of lemma awn 5 mm long. Column of lemma awn 10 mm long, hirtellous, with 0.5–1.5 mm long hairs. Palea 1 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Lodicules 3, 0.4–0.6 mm long. Anthers 3, 3.5 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 3–3.5 mm long. Embryo 0.33 length of caryopsis. Hilum linear, 0.75 length of caryopsis.

**Distribution (TDWG). Continent.** Australasia.

**Country /Province /State.** Australia. Western Australia.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–60 cm long, compressible. Lateral branches lacking. Leaf-sheaths loose, smooth or antrorsely scabrous. Ligule an eciliate membrane, 2–4 mm long, obtuse. Leaf-blade involute, 1–2 mm wide, stiff. Leaf-blade surface smooth or scaberulous.

**Inflorescence.** Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, 15–30 cm long. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–6 mm long, tip widened.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9 mm long, 1.2 length of upper glume, membranous, much thinner above, without keels, 3 -veined. Lower glume apex entire or dentate, 2–3 -fid, obtuse. Upper glume lanceolate, 7–8 mm long, membranous, much thinner above, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 5 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 45–60 mm long overall, with twisted column. Column of lemma awn 13 mm long, pubescent. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Stigmas 2.


**Derivation** (Clifford & Bostock 2007): L. spiny. Plants forming spiny tussocks.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 50 cm long, 1.5–2 mm diam., 3–4 -noded. Culm-internodes estritate or ridged. Culm-nodes flush with internodes, pubescent. Lateral branches lacking. Leaf-sheaths tight, ribbed, glabrous on surface, outer margin hairy. Leaf-sheath auricles erect, 1–3.5 mm long. Ligule an eciliate membrane or a ciliolate membrane, 1.5–2.5 mm long, pubescent on abaxial
surface, truncate or obtuse. Leaf-blades erect, convolute, 7–15 cm long, 1–2 mm wide, stiff. Leaf-blade surface ribbed, scabrous, rough adaxially. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 10–20 cm long, 1.5–3 cm wide. Primary panicle branches 1.5–2.5 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flattened, 2–10 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 21–23 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.6–3.2 mm long, pubescent, acute. Floret callus hairs 0.1–1 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 21–23 mm long, 1.3–1.5 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface smooth to scabrous. Lower glume apex acute or acuminate. Upper glume lanceolate, 14–18 mm long, membranous, without keels, 5 -veined. Upper glume surface smooth to scabrous. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma linear, subterete, 8–10 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface smooth or granulose, pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white or yellow, 0.4–0.7 mm long. Lemma apex dentate, 2 -fid, with lobes 0.2–0.7 mm long, surmounted by a ring of hairs, with this appendage 0.6–1.2 mm long, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 90–110 mm long overall, with twisted column. Middle segment of lemma awn 15–20 mm long. Column of lemma awn 10–20 mm long, pubescent, with 0.2–0.4 mm long hairs. Palea 1 length of lemma, 2 -veined, without keels. Palea surface pubescent, hairy on back.

**Flower and Fruit.** Lodicules 2, 1–1.5 mm long. Anthers 3, 3.2–3.8 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 3 mm long. Embryo 0.15 length of caryopsis. Hilum linear, 0.7 length of caryopsis.

**Distribution (TDWG).** Continent: Australasia.

**Country /Province /State.** Australia. South Australia.


**Derivation** (Clifford & Bostock 2007): L. *elegans*, elegant; *-issima*, most. Very attractive in some respect, usually the inflorescence.

**Classification.** Subfamily Pooidae. Tribe: Stipeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then...
both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–10 mm long, 0.75–0.85 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface pubescent. Lower glume apex acuminate. Upper glume lanceolate, 8–10 mm long, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 8 mm long, coriaceous, without keel, more than 3-veined. Lemma surface scabrous, rough above, pubescent, hairy at base. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 30–55 mm long overall, with twisted column. Column of lemma awn 15 mm long, plumose. Palea 2 mm long, 0.25 length of lemma, without keels.

Flower and Fruit. Stigmas 2.


Country /Province /State. Australia. New South Wales, South Australia, Victoria, Western Australia. Eremean, South-West. NW & Lake Eyre, Southern. Coast, Tablelands, Western Slopes, Western Plains.


Derivation (Clifford & Bostock 2007): Gk. eremos, desert; phileo, love. Desert species.


Habit, Vegetative Morphology. Perennial, culms solitary. Culms erect or geniculately ascending, 60–100 cm long. Culm-nodes pubescent. Leaf-sheaths glabrous on surface or pubescent. Ligule an eciliate membrane or an ciliolate membrane. Leaf-blades convolute, 25–55 cm long, 2–3 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade apex attenuate, filiform.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 13–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, much thinner above, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 13–17 mm long, membranous, with hyaline margins, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 10 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma hairs tawny. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 65–70 mm long overall, with twisted column. Column of lemma awn 25–30 mm long, plumose. Palea 1 length of lemma, without keels.

Flower and Fruit. Stigmas 2.


Country /Province /State. Australia. Western Australia, South Australia, New South Wales, Victoria. Eremean, South-West. NW & Lake Eyre, Southern. Coast, Tablelands, Western Slopes, Western Plains.


**Classification**. Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology**. Perennial, caespitose, clumped densely. Culms erect, 40 cm long, 2 -noded. Culm-internodes scaberulous or antrorsely scabrous, distally glabrous. Culm-nodes pubescent. Lateral branches lacking. Leaves mostly basal. Leaf -sheaths tight, wider than blade at the collar, striately veined, antrorsely scabrous, pubescent, outer margin hairy. Leaf-sheath oral hairs lacking or ciliate. Ligule an eciliate membrane, 0.5 mm long, obtuse. Leaf-blades filiform, convolute, 5–25 cm long, 0.5 mm wide. Leaf-blade surface scabrous, puberulous to hirsute, hairy on both sides.


**Fertile Spikelets**. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, acute.

**Glumes**. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 8–11 mm long, 1.1–1.3 length of upper glume, hyaline, without keels, 3 -veined. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume lanceolate, 7–8 mm long, hyaline, without keels, 5 -veined. Upper glume surface scabrous. Upper glume apex acute.

**Florets**. Fertile lemma linear, subterete, 4.5–5.5 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface scaberulous, pubescent. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight or bigeniculate, 38–55 mm long overall, with twisted column. Palea 1 length of lemma, without keels. Palea surface pubescent, hairy on back.

**Flower and Fruit**. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent**. Australasia.

**Country /Province /State. Australia**. Western Australia, South Australia, Victoria. South-West. Southern.


**Derivation** (Clifford & Bostock 2007): L. fere, nearly. Similar to *Stipa setacea*.

**Classification**. Subfamily Pooideae. Tribe: Stipeae.
Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–100 cm long, 0.4–1.2 mm diam., compressible, 3-noded. Culm-internodes striate or ridged, smooth or scaberulous. Culm-nodes swollen. Lateral branches lacking. Leaf-sheaths ribbed, smooth or scaberulous, outer margin glabrous. Ligule an eciliate membrane, 3.5–8 mm long, acute or acuminate. Leaf-blades convolute, 15–30 cm long, 0.7–0.9 mm wide. Leaf-blade surface ribbed, scaberulous, rough abaxially, puberulous, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 6–12 cm long, 0.5–1 cm wide. Primary panicle branches 0.1–2.5 cm long. Panicle axis scaberulous. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 2–7 mm long, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.7–1.4 mm long, puberulous, hairy. Floret callus hairs 0.1–1 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 4–7 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface smooth or asperulous. Lower glume apex acute. Upper glume lanceolate, 4–6 mm long, membranous, without keels, 3–5 -veined. Upper glume surface smooth or asperulous. Upper glume apex acute.

Florets. Fertile lemma oblanceolate, subterete, 3–4.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface smooth or granulose, pubescent. Lemma margins convolute, covering most of palea. Lemma hairs 0.5–1 mm long. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 12–18 mm long overall, with twisted column. Middle segment of lemma awn 3–4 mm long. Column of lemma awn 3.5–6 mm long. Palea 1 length of lemma, 2 -veined, without keels. Palea surface pubescent, hairy on back.

Flower and Fruit. Lodicles 3, 0.5–0.8 mm long. Anthers 3, 1.4–1.8 mm long, anther tip smooth. Stigmas 2. Caryopsis with adherent pericarp, 2–2.5 mm long. Embryo 0.3–0.4 length of caryopsis. Hilum linear, 0.8–1 length of caryopsis.

Country/Province/State. Australia. Northern Territory.
Central Australia.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths grey, pubescent. Culms erect or geniculately ascending, robust, 40–80 cm long, 3–4-noded. Culm-nodes pubescent. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.5 mm long, truncate. Leaf-blades convolute, 9–54 cm long, 2–5 mm wide, stiff. Leaf-blade surface scaberulous, rough adaxially, glabrous. Leaf-blade apex attenuate.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subtetere, 9.8–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.1–3.5 mm long, pubescent, pungent.


**Florets.** Fertile lemma linear, subtetere, 7.5–12 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface papillose, rough above, pubescent. Lemma margins convolute, covering most of palea. Lemma hairs red. Lemma apex entire or dentate, 2-fid, with lobes 0.1–0.6 mm long, surmounted by a ring of hairs, with this appendage 0.5–1.3 mm long, awned, 1-awned. Principal lemma awn bigeniculate, 50–60 mm long overall, with twisted column. Column of lemma awwn 17–30 mm long, puberulous. Palea 4.5–6.5 mm long, 0.8 length of lemma, without keels. Palea surface pubescent.

**Flower and Fruit.** Lodicules 3, 2–2.5 mm long. Anthers 3, 0.8–1.9 mm long. Stigmas 2.

**Distribution (TDWG).** Continent: Australasia. Country /Province /State: Australia, New Zealand (*). Western Australia, South Australia, New South Wales, Victoria, Tasmania. New Zealand South I. Eremean, South-West. Southern Coast.


**TYPE from Australia.** Basionym or Replaced Name: *Stipa geoffreyi*. T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database: Western Australia: Lake King, 33°05′26″S 119°33′37″E, 12 Feb 1993, S.W.L. Jacobs 7030 (HT:NSW-293105. IT:PERTH).


**Classification.** Subfamily Pooideae. Tribe: Stipeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subtetere, 10–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–3 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–15 mm long, membranous, yellow, 1-keeled, 3-veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 12–16 mm long, membranous, yellow, 1-keeled, 3-veined. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma linear, subtetere, 9–12 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma hairs white, 1–1.5 mm long. Lemma apex dentate, 2-fid, with lobes 2.5 mm long, awned, 1-awned. Principal lemma awn from a sinus, bigeniculate, 50–80 mm long overall, with twisted column. Middle segment of lemma awwn 5–10 mm long. Column of lemma awwn 5–10 mm long. Palea 1 length of lemma, without keels. Palea surface pubescent, hairy on back. Palea apex dentate, 3–4-fid.
Flower and Fruit. Lodicules 2, 1–2 mm long. Stigmas 2.


Country /Province /State. Australia. Western Australia.


TYPE from Australia. Basionym or Replaced Name: Stipa gibbona Vickery, Telopea 2: 14 (1980).


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 100–150 cm long, 1.5–2.5 mm diam., 2–3 -noded. Culm-internodes smooth or scaberulous. Culm-nodes swollen, pubescent. Lateral branches lacking. Leaf-sheaths ribbed, glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.3–0.5 mm long, pubescent on abaxial surface, truncate. Leaf-blades flat or convolute, 15–30 cm long, 2–5 mm wide. Leaf-blade surface pubescent, ribbed, hairy abaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 11–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1–1.5 mm long, pubescent, truncate.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 11–17 mm long, 1.3–1.4 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface scabrous, rough generally or on veins. Lower glume apex acute or acuminate. Upper glume elliptic, 8–13 mm long, membranous, without keels, 5 -veined. Upper glume surface scabrous, rough generally or on veins. Upper glume apex acute or acuminate.

Florets. Fertile lemma oblong, subterete, gibbous, 4.5–6 mm long, coriaceous, dark brown to black, without keel, 5 -veined, more than 3-veined. Lemma surface granulose, pilose. Lemma margins convolute, covering most of palea. Lemma hairs white or yellow. Lemma apex surrounded by a ring of hairs, with this appendage 0.8–1.3 mm long, awned, 1 -awned. Principal lemma awn eccentric, bigeniculate, 25–35 mm long overall, with twisted column. Middle segment of lemma awn 1–12 mm long. Column of lemma awn 5–8 mm long. Palea 1 length of lemma, 2 -veined, without keels.

Flower and Fruit. Lodicules 3, 0.5–1.3 mm long. Stigmas 2. Caryopsis with adherent pericarp, 3.5 mm long. Embryo 0.33 length of caryopsis. Hilum linear, 0.75 length of caryopsis.


Country /Province /State. Australia. South Australia, New South Wales, Victoria.

Southern. Western Slopes, Western Plains.


TYPE from Australia. Basionym or Replaced Name: Stipa hemipogon Benth., Fl. Austral. 7: 569 (1878). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: LT: Drummond 376,


**Derivation** (Clifford & Bostock 2007): Gk. hemi-, half; pogon, beard. Lemma hairy only towards the apex.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, robust, 40–60 cm long. Leaf-sheaths smooth or scaberulous. Ligule a ciliate membrane. Leaf-blades erect, convolute, 2–3 mm wide. Leaf-blade surface glabrous or hispid.

**Inflorescence.** Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, oblong, 15–30 cm long. Primary panicle branches appressed, 5–10 cm long. Spikelets solitary. Fertile spikelets sessile or pedicelled. Pedicels absent or present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 12–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 12–17 mm long, membranous, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 6.5–8.5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 45–67 mm long overall, with twisted column. Column of lemma awn 10–12 mm long, plumose, hairy generally or on lower part. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG).** Continent. Australasia.

**Country/Province/State.** Australia. Western Australia, South Australia, Victoria.

South-West. Southern.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): Named for Surrey Jacobs (1946–2009), Australian botanist based at NSW.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial. Culms 80–120 cm long. Leaf-sheaths puberulous. Leaf-sheath auricles erect. Ligule an eciliate membrane, 0.4–1 mm long, obtuse. Leaf-blades erect, filiform, conduplicate, 35–45 cm long, 0.5–0.8 mm wide, stiff. Leaf-blade surface ribbed, grooved adaxially, puberulous, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1.6–2.1 mm long, pubescent, acute. Floret callus hairs 0.6–0.7 mm long (white).
**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–12 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume acuminately. Upper glume lanceolate, 9–12 mm long, membranous, without keels, 5 -veined. Upper glume apex acuminately.

**Florets.** Fertile lemma lanceolate, 6–8 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white, 0.4–0.5 mm long. Lemma apex dentate, 2 -fid, with lobes 0.4–0.8 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 38–49 mm long overall, with twisted column. Middle segment of lemma awn 4–9 mm long. Column of lemma awn 11–17 mm long, puberulous, with 0.1–0.15 mm long hairs. Palea 1 length of lemma, without keels. Palea surface pubescent, hairy on back.

**Florests and Fruit.** Lodicules 3, ovate, 1.1–1.5 mm long. Anthers 3, 3.2–3.3 mm long, anther tip smooth. Caryopsis with adherent pericarp, fusiform, 4.5–5 mm long. Embryo 0.25 length of caryopsis. Hilum linear, 0.66 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia. Country/Province/State. Australia. Western Australia.


**Images:** D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

**Derivation** (Clifford & Bostock 2007): L. *juncea*, rush-like; *folium*, leaf. With rush-like leaf-blades or culms.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Cataphylls evident. Culms erect, reed-like, 60–100 cm long, 2–3 -noded. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 5–7 mm long. Leaf-blades erect, aciculate, convolute, 30–60 cm long, 1–2 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 16–20 cm long. Primary panicle branches 2–6 cm long, bearing 6–10 fertile spikelets on each lower branch. Panicle branches smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–6 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile floret, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9 mm long, 1 length of upper glume, membranous, light brown, without keels, 3–5 -veined. Lower glume apex acute. Upper glume lanceolate, 9 mm long, membranous, light brown, without keels, 3–5 -veined. Upper glume apex acute.

**Florets.** Fertile lemma lanceolate, 7 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma hairs white, 1–2 mm long. Lemma apex dentate, 2 -fid, with lobes 1.2–2 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 50 mm long overall, with twisted column. Column of lemma awn 10 mm long. Palea 1 length of lemma, without keels. Palea surface pilose.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG).** Continent. Australasia.

Country/Province/State. Australia. Western Australia.


Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pilose or woolly. Culms 45 cm long, 1–2 mm diam., 1–2-noded. Culm-internodes distally pubescent. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths inflated, longer than adjacent culm internode, glabrous on surface to pubescent, outer margin hairy. Leaf-sheath oral hairs woolly. Ligule a ciliolate membrane, 0.4–1.5 mm long. Leaf-blades flat or involute, 20 cm long, 1.5–4 mm wide. Leaf-blade surface pubescent or woolly, densely hairy.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, linear, 10–15 cm long, bearing few spikelets. Primary panicle branches 1–4 cm long. Panicle axis pubescent. Panicle branches pubescent or pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 4–15 mm long, pubescent or ciliate.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 19–26 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3 mm long, pilose, acute.


Florets. Fertile lemma oblanceolate, subterete, 6.5–8 mm long, coriaceous, dark brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma margins convolute, exposing palea. Lemma apex scabrous, surmounted by a ring of hairs, with this appendage 1.5 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 65–80 mm long overall, with twisted column. Middle segment of lemma awn 12–15 mm long. Column of lemma awn 10–15 mm long, pubescent, with 0.3 mm long hairs. Palea 1 length of lemma, 2 -veined, without keels.

Flower and Fruit. Lodicules 2 or 3, 0.5–1 mm long. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, 4 mm long. Embryo 0.33 length of caryopsis. Hilum linear, 0.85 length of caryopsis.


TYPE from Australia. Basionym or Replaced Name: Stipa macalpinei Reader, Victoria Naturalist 15: 143 (1899). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Hilly Mallee country and sandy heaths, Lowan, Dimboola Shire, 1892, F.M. Reader s.n..


**Classification.** Subfamily Pooideae. Tribe: Stipeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 22 mm long, 1.6 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 14 mm long, membranous, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 7 mm long, coriaceous, without keel, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma hairs yellow. Lemma apex anawed, 1 -awned. Principal lemma awn geniculate, 120–150 mm long overall, with twisted column. Column of lemma awn 45 mm long, glabrous. Palea 1 length of lemma, without keels. Palea surface pubescent, hairy on back.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia, South Australia, Victoria. South-West. Southern.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Cataphylls evident. Culms erect or geniculately ascending, 1.5–2.5 mm diam., 2–3 -nodded. Culm-internodes terete, distally glabrous or pubescent. Culm-nodes swollen, pubescent. Leaves basal and caudine. Leaf-sheaths tight, pubescent or hirsute, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1–2.2 mm long, pilose on abaxial surface, lacerate, truncate or obtuse or acute. Leaf-blades involute, 20–40 cm long, 2–4 mm wide. Leaf-blade surface ribbed, grooved adaxially, pubescent or hirsute, hairy on both sides.

**Inflorescence.** Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, elliptic, 15–25 cm long, 3–6 cm wide. Primary panicle branches spreading, 5–10 cm long. Panicle axis scaberulous, glabrous or puberulous. Panicle branches scaberulous, glabrous or puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 5–10 mm long, scaberulous, glabrous or puberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 16–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–2.8 mm long, pilose, acute.
Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 16–20 mm long, 1.3 length of upper glume, membranous, much thinner above, without keels, 3 -veined. Lower glume surface smooth or asperulous, rough on veins. Lower glume apex acuminate. Upper glume lanceolate, 10–15 mm long, membranous, much thinner above, without keels, 5 -veined. Upper glume surface smooth or asperulous, rough on veins. Upper glume apex acuminate.

Florets. Fertile lemma oblong or oblanceolate, subterete, 7–8.2 mm long, coriaceous, without keel, more than 3-veined. Lemma surface hirsute. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 0.2–0.5 mm long, surmounted by a ring of hairs, with this appendage 2.5–3.5 mm long, awned, 1 -awned. Principal lemma aven from a sinus, bigeniculate, 55–65 mm long overall, with twisted column, limb glabrous or puberulous, with 0.2–0.3 mm long hairs. Middle segment of lemma aven 9–12 mm long. Column of lemma aven 11–13 mm long, puberulous, with 0.2–0.3 mm long hairs. Palea 0.9 length of lemma, without keels. Palea surface puberulous, hairy on back. Palea apex ciliate.

Flower and Fruit. Lodicules 3, 1.5–2 mm long. Anthers 3, 1.2–4 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 3.5–4.5 mm long. Embryo 0.3–0.4 length of caryopsis. Hilum linear, 0.75 length of caryopsis.


Habit, Vegetative Morphology. Perennial, short-lived, culms solitary or caespitose. Culms erect, 30–150 cm long, 1–3.5 mm diam., 3–6 -nodded. Culm-internodes distally pubescent. Culm-nodes pubescent. Leaf-sheaths loose, pubescent, outer margin glabrous or hairy. Leaf-sheath oral hairs bearded. Ligule a ciliolate membrane, 1.2 mm long, pilose on abaxial surface. Leaf-blades involute, 15–45 cm long, 1.5–3 mm wide, coriaceous, stiff. Leaf-blade surface ribbed, pubescent, densely hairy, hairy adaxially. Leaf-blade apex attenuate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 17.4–23 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.3–3.9 mm long, pubescent, pungent.


Florets. Fertile lemma lanceolate, subterete, 6.6–10.5 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface scaberulous, rough above, pubescent. Lemma margins convolute, covering most of palea. Lemma hairs tawny. Lemma apex awned, 1 -awned. Principal lemma aven bigeniculate, 45–65 mm long overall, with twisted column, limb ciliate. Column of lemma aven 16.5–32
mm long, hirsute, with 1–2 mm long hairs. Palea 5–6 mm long, 0.9 length of lemma, without keels. Palea surface pubescent.

**Flower and Fruit.** Lodicules 2, 1.5 mm long. Anthers 3, 3.2–4.7 mm long. Stigmas 2.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia, South Australia, New South Wales, A.C.T., Victoria, Tasmania.

South-West. Southern. Coast, Tablelands, Western Slopes, Western Plains.


**Derivation** (Clifford & Bostock 2007): in honor of Ferdinand Jacob Heinrich Mueller (1825–96) German-born Australian botanist.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial. Cataphylls evident. Rhizomes short, knotty. Culms erect or decumbent, 50–100 cm long, 0.7–0.9(–1.2) mm diam., wiry. Lateral branches fastigiate or suffrutescent. Leaves cauline, with blades commonly suppressed, transferring photosynthetic function to sheath and culm. Leaves sheaths wider than blade at the collar, ribbed (slightly to moderately). Leaf-sheath auricles erect. Ligule a fringe of hairs. Leaf-blades filiform, 0.1 cm long, 0.15 mm wide, stiff.

**Inflorescence.** Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, terete or flattened (slightly), 6–15 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets subterete, 18–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–3 mm long, pubescent or pilose.

**Glumes.** Glumes two, persistent, similar, thinner than fertile lemma. Lower glume lanceolate, 18–30 mm long, 1 length of upper glume, membranous or herbaceous, much thinner on margins, 3 -veined. Lower glume surface scabrous (upper 20 %). Lower glume apex acute. Upper glume lanceolate, 15–30 mm long, membranous or herbaceous, with scarious margins, without keels, 5 -veined. Upper glume surface scabrous (upper 20 %). Upper glume apex acute.

**Florets.** Fertile lemma linear to lanceolate, subterete, 13–20 mm long, herbaceous to coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent or pilose. Lemma hairs 0.3–0.6 mm long. Lemma apex lobed, 2 -fid, awned, 1 -awned. Principal lemma awn 50–100 mm long overall, with a straight or slightly twisted column, persistent or deciduous, limb puberulous (hairs 0.02–0.2 mm). Column of lemma awn 40–55 mm long. Palea elliptic (narrow), 0.75 length of lemma, coriaceous, 2 -veined, without keels. Palea surface pubescent or pilose, hairy on back (a band).

**Flower and Fruit.** Lodicules 3, oblanceolate, membranous. Anthers 3, 8–13 mm long.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. South Australia, Victoria.

Southern.


**Classification.** Subfamily Pooidae. Tribe: Stipeae.


**Inflorescence.** Inflorescence a panicle. Panicle open, linear or elliptic, 5–8 cm long, 1–2 cm wide. Primary panicle branches 3 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–2 mm long, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 10–12 mm long, 1.2 length of upper glume, hyaline, without keels, 3 -veined. Lower glume apex acuminated. Upper glume lanceolate, 8–10 mm long, hyaline, without keels, 5 -veined. Upper glume apex acuminated.

**Florets.** Fertile lemma linear, subterete, 6–8 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, with twisted column. Column of lemma awn 18–25 mm long. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Stigmas 2. Caryopsis with adherent pericarp.

both fertile or the upper sterile. Spikelets linear, subterete, 14–26 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.5 mm long, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 14–16 mm long, 1.4 length of upper glume, hyaline, without keels, 3-veined. Lower glume apex acuminate. Upper glume lanceolate, 10–11 mm long, hyaline, without keels, 5-veined. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 7 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white. Lemma apex awned, 1-awned. Principal lemma awn geniculate, 65–70 mm long overall, with twisted column. Column of lemma awn 26–28 mm long. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3. Stigmas 2. Caryopsis with adherent pericarp.


**Derivation** (Clifford & Bostock 2007): L. *nito*, shine; Spikelets or lemmas shiny.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations intravaginal. Culms erect, 75 cm long, 1–3 mm diam., compressible, 2–3-noded. Culm-nodes swollen. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths longer than adjacent culm internode, glabrous on surface or puberulous, outer margin glabrous or hairy. Ligule an eciliate membrane or a ciliolate membrane, 0.3–1 mm long, truncate. Collar glabrous. Leaf-blades flat or involute, 20–40 cm long, 1–2 mm wide. Leaf-blade surface ribbed, scaberulous or scabrous. Leaf-blade margins glabrous or ciliate.

**Inflorescence.** Inflorescence a panicle. Panicle open or contracted, linear, 25–55 cm long, 0.5–7 cm wide. Primary panicle branches 5–6 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flattened, 2–10 mm long, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.2–2.2 mm long, pilose, acute. Floret callus hairs 1.5 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–13 mm long, 1 length of upper glume, membranous, without keels, 3-veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acute or acuminate. Upper glume lanceolate, 8–13 mm long, membranous, without keels, 5-veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma linear, subterete, 5–6 mm long, coriaceous, without keel, 5-veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex emarginate, awned, 1-awned. Principal lemma awn geniculate, recurved at base of limb, 45–70 mm long overall, with twisted column. Middle segment of lemma awn 4 mm long. Column of lemma awn 6–9 mm


Classification. Subfamily Pooideae, Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect or geniculately ascending, 25–50 cm long, 1 mm diam., firm, 2–3 -nodded. Culm-internodes terete, distally pubescent. Culm-nodes flush with internodes, glabrous or pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths tight, ribbed, glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 0.4–1.5 mm long, truncate. Leaf-blades convolute, 10–20 cm long, 1.5–3.5 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially. Leaf-blade margins smooth or scaberulous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 20–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 3.5 mm long, pubescent, acute.


Florets. Fertile lemma linear, subterete, 12–15 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface scabrous, pubescent. Lemma margins convolute, covering most of palea. Lemma hairs 0.5–1 mm long. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 85–130 mm long overall, with twisted column. Middle segment of lemma awn 10 mm long. Column of lemma awn 45–60 mm long. Palea 1 length of lemma, 2 -veined, without keels. Palea surface glabrous.

Flower and Fruit. Lodicles 2, 1–1.7 mm long. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, 6–7.5 mm long. Embryo 0.2 length of caryopsis. Hilum linear, 1 length of caryopsis.


Derivation (Clifford & Bostock 2007): L. nodus, knot; -osa, abundance. Culms with more nodes than those of related species.


Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms erect, 50–100 cm long, 1–2 mm diam., 3–5 -nodded. Culm-internodes smooth or scaberulous. Culm-nodes swollen, glabrous. Lateral branches lacking. Leaves basal and cauline. Leaf-sheaths mostly shorter than adjacent culm internode, smooth or scaberulous, outer margin glabrous or hairy. Ligule an eciliate membrane, 0.5–2 mm long, truncate. Collar glabrous. Leaf-blades flat or involute, 15–30 cm long, 1–3 mm wide. Leaf-blade surface ribbed, scaberulous, rough on both sides. Leaf-blade margins glabrous or ciliate.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–2.5 mm long, pilose, acute. Floret callus hairs 0.8 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–15 mm long, 0.75–1 length of upper glume, hyaline, without keels, 3 -veined. Lower glume surface smooth or asperulous. Lower glume apex acute or acuminate. Upper glume lanceolate, 7–19 mm long, hyaline, without keels, 5 -veined. Upper glume surface smooth or asperulous. Upper glume apex acute or acuminate.

Florets. Fertile lemma linear, suberete, 4–7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs 0.3–0.6 mm long. Lemma apex entire or dentate, 2 -fid, with lobes 0–0.4 mm long, awned, 1 -awned. Principal lemma awn apical from a sinus, bigenicate, recurved at base of limb, 45–100 mm long overall, with twisted column. Middle segment of lemma awn 2–5 mm long. Column of lemma awn 5–10 mm long. Palea 1 length of lemma, 2 -veined, without keels. Palea surface puberulous, hairy on back.

Flower and Fruit. Lodicules 3, 1–2 mm long. Anthers 3, 2–3 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 3–4 mm long. Embryo 0.2–0.3 length of caryopsis. Hilum linear, 0.5–0.8 length of caryopsis.


Country /Province /State. Australia, New Zealand (*). South Australia, Queensland, New South Wales, Victoria, Tasmania. New Zealand North I, New Zealand South I.

NW & Lake Eyre, Southern. South East. Coast, Tablelands, Western Slopes, Western Plains.


**Derivation** (Clifford & Bostock 2007): named for "Nulla Nulla" a property in New South Wales, Australia.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 9–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–2.7 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–11 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 8–10 mm long, membranous, without keels, 5 -veined. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma linear, subterete, 5–6 mm long, coriaceous, dark brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex scabrous, with a short cylindrical neck or surmounted by a ring of hairs, with this appendage 1–1.5 mm long (as to hairs), awned, 1 -awned. Principal lemma awn bigeniculate, 50–70 mm long overall, with twisted column. Middle segment of lemma awn 10–15 mm long. Column of lemma awn 50–60 mm long, puberulous, with 0.2 mm long hairs. Palea 1 length of lemma, 2 -veined, without keels. Palea surface glabrous or pubescent, hairy above.

**Flower and Fruit.** Lodicules 3. Anthers 3. Caryopsis with adherent pericarp, 2.7–3 mm long. Embryo 0.25–0.33 length of caryopsis. Hilum linear, 0.66–0.75 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. South Australia, New South Wales, Victoria. NW & Lake Eyre, Southern. Western Plains.


**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Nullarbor Plain, Australia.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 4–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 0.5–0.8 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 4–5.5 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface hispidulous. Upper glume lanceolate, 4–5.5 mm long, membranous, without keels, 5 -veined. Upper glume surface hispidulous. Upper glume apex obtuse or acute.

Florets. Fertile lemma linear, subterete, 3–4 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface granulose, pilose. Lemma margins convolute, covering most of palea. Lemma apex entire or dentate, 2 -fid, with lobes 0.1 mm long, awned, 1 -awned. Principal lemma awn apical or from a sinus, bigeniculate, 20–30 mm long overall, with twisted column. Middle segment of lemma awn 4–5 mm long. Column of lemma awn 5–8 mm long. Palea 0.8 length of lemma, 2 -veined, without keels. Palea surface pilose.

Flower and Fruit. Lodices 2 or 3. Anthers 3, 1.5–1.7 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp. Hilum linear.


Country/Province/State. Australia. Western Australia.

South-West.


Derivation (Clifford & Bostock 2007): Gk. oligos, few; stachys, ear of corn. Inflorescence with few branches.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, pubescent, acute.
Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 14 mm long, 1.2 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 12 mm long, membranous, without keels, 5 - veined. Upper glume apex acute or acuminate.

Florets. Fertile lemma lanceolate, subterete, 9 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough above, pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma hairs yellow. Lemma apex dentate, 2 -fid, with lobes 1–2 mm long, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 50 mm long overall, with twisted column. Column of lemma awn 20 mm long, glabrous. Palea 1 length of lemma, without keels. Palea surface pilose.

Flower and Fruit. Stigmas 2.


Country /Province /State. Australia. South Australia, Victoria.

Southern.


TYPE from Australia. Basionym or Replaced Name: Stipa petraea Vickery, Telopea 2: 15 (1980).


Derivation (Clifford & Bostock 2007): L. that grows amongst rocks. Growing in rocky places.


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 50–100 cm long, 1.5–2 mm diam., 3–5 -noded. Culm-nodes swollen, pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths glabrous on surface, outer margin glabrous. Ligule a ciliate membrane, 0.1–1 mm long. Collar glabrous. Leaf-blades conduplicate or involute, 25–50 cm long, 1.5 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially, glabrous, hairless except near base.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile spikelets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 11–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, pilose (tawny hairs), acute. Floret callus hairs 0.3–0.8 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 11–15 mm long, 1 length of upper glume, membranous, without keels, 6 -veined. Lower glume surface asperulous. Lower glume apex acute or acuminate. Upper glume lanceolate, 11–13 mm long, membranous, without keels, 5 -veined. Upper glume surface asperulous. Upper glume apex acute or acuminate.

Florets. Fertile lemma linear, subterete, 7–9.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface smooth or granulose, pilose. Lemma margins convolute, covering most of palea. Lemma hairs tawny, 0.5–1.5 mm long. Lemma apex lobed, 2 -fid, with lobes 1.5–2.5 mm long, surmounted by a ring of hairs, with this appendage 2.5 mm long, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 40–55 mm long overall, with twisted column. Middle segment of lemma awn 10 mm long. Column of lemma awn 10–15 mm long. Palea 1 length of lemma, 2 -veined, without keels. Palea surface pilose.

Flower and Fruit. Lodicules 3, 1–1.3 mm long. Anthers 3, 4.5–5 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp. Hilum linear.


Country /Province /State. Australia. South Australia.

Southern.


**Derivation** (Clifford & Bostock 2007): *L. pilus*, a hair; -ata, possessing. With long hairs on the leaf-blades or spikelets.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths pubescent. Basal innovations extravaginal. Culms erect, 40–85 cm long, 0.8–1 mm diam., firm, 2–3 -noded. Culm-internodes distally pubescent. Culm-nodes swollen, glabrous or pubescent. Lateral branches lacking. Leaf-sheaths tight, mostly shorter than adjacent culm internode, glabrous on surface or pubescent, outer margin hairy. Leaf-sheath oral hairs ciliate, 1–2 mm long. Ligule a ciliolate membrane, 1–2 mm long, pubescent on abaxial surface, entire or lacerate, truncate. Leaf-blades involute, 6–12 cm long, 2–6 mm wide. Leaf-blade surface ribbed, scabrous, rough abaxially, pubescent, hairy adaxially. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 10–20 cm long, 2–3 cm wide. Panicle axis smooth or scaberulous. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedics present, flattened, 4–8 mm long, smooth or scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–10 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–9 mm long, membranous, without keels, 3 -veined. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma linear, subterete, 4–5 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface papillose, pubescent. Lemma margins convolute, covering most of palea. Lemma apex surmounted by a ring of hairs (in 1–2 tufts), awned, 1 -awned. Principal lemma awn geniculate, recurved at base of limb, 40–50 mm long overall, with twisted column. Column of lemma awn 7–11 mm long, pubescent, with 0.2–0.5 mm long hairs. Palea 0.75 length of lemma, 2 -awned, without keels. Palea surface pubescent, hairy on back.

**Flower and Fruit.** Lodicules 2, 1–1.5 mm long. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, 2.7–3 mm long. Embryo 0.33 length of caryopsis. Hilum linear, 0.66 length of caryopsis.

**Distribution (TDWG), Continent.** Australasia.

**Country /Province /State.** Australia. South Australia, Victoria. Southern.


**Derivation** (Clifford & Bostock 2007): G. *platys*, broad; *chaete*, bristle. Awns flattened.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.


**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, 10–20 cm long. Primary panicle branches appressed or ascending, 4–5 cm long, bearing 3–4 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flexuosity, 3–10 mm long, ciliate.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.6 mm long, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–15 mm long, 1.2–1.3 length of upper glume, membranous, much thinner above, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 9–12 mm long, membranous, with hyaline margins, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, recurved at base of limb, flat below (as to limb), 60–80 mm long overall, with twisted column. Column of lemma awn 10 mm long, puberulous. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG).** Continent. Australasia. Country /Province /State. Australia. Western Australia, South Australia, New South Wales, Victoria. South-West. NW & Lake Eyre, Southern. Western Slopes, Western Plains.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 20 mm long, 1.3 length of upper glume, membranous, much thinner above,


Derivation (Clifford & Bostock 2007): L. pubes, signs of puberty; -ula, diminutive. Plant covered in whole or in part with short hairs.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–50 cm long. Ligule a ciliate membrane. Leaf-blades filiform, involute, 1–2 mm wide. Leaf-blade surface glabrous or puberulous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, acute.

Glumes. Glumes present, similar, exceeding apex of florets, thinner than fertile lemma, recurved at apex. Lower glume ovate, 1 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume apex obtuse or acute. Upper glume ovate, 10 mm long, membranous, firmer above, without keels, 5 -veined. Upper glume apex obtuse or acute.

Florets. Fertile lemma lanceolate, suberete, 6 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma aawn bigeniculate, 30 mm long overall, with twisted column. Column of lemma aawn 8 mm long, glabrous. Palea 1 length of lemma, without keels.

Flower and Fruit. Stigmas 2.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology**. Perennial, caespitose. Rhizomes short. Basal innovations extravaginal. Culms erect, 80–150 cm long, 1–4 mm diam., firm, 2–3-noded. Culm-internodes terete, distally pubescent. Culm-nodes swollen, pubescent. Lateral branches lacking. Leaf-sheaths tight, glabrous on surface or pubescent, outer margin hairy. Leaf-sheath oral hairs pubescent. Ligule an eciliate membrane or a ciliolate membrane, 0.4–1 mm long, scarious, truncate. Leaf-blades flat or convolute, 25–50 cm long, 2–4 mm wide. Leaf-blade surface ribbed, pubescent, hairy adaxially or on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle open, 15–30 cm long, 2–4 cm wide. Primary panicle branches branching laterally, 3–7 cm long. Panicle axis scabrous. Panicle branches angular, scabrous, glabrous or pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 10–30 mm long, scabrous, glabrous to pubescent.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, suberete, 17–24 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 3.4–5.5 mm long, pubescent, acute.


**Florets.** Fertile lemma linear, suberete, 11–15 mm long, coriaceous, dark brown, without keel, 5-veined, more than 3-veined. Lemma surface tuberculate, rough above, pilose. Lemma margins convolute, covering most of palea. Lemma hairs tawny. Lemma apex with a short cylindrical neck, awned, 1-awned. Principal lemma awn bigeniculate, 70–100 mm long overall, with twisted column. Middle segment of lemma awn 10–15 mm long. Column of lemma awn 30–55 mm long, puberulous, with 0.05–0.15 mm long hairs. Palea 0.5–0.9 length of lemma, 2-veined, without keels. Palea surface glabrous.

**Flower and Fruit.** Lodicles 2 or 3, 1–2 mm long. Anthers 3, 2–6 mm long, anther tip smooth. Stigmas 2. Caryopsis with adherent pericarp, 5–8 mm long. Embryo 0.15–0.2 length of caryopsis. Hilum linear, 0.9 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Queensland, New South Wales.

Central, South East, Inland. Coast, Tablelands.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.
Habit, Vegetative Morphology. Perennial, short-lived, culms solitary or caespitose. Culms 60–110 cm long, 3–5 -noded. Leaf-sheaths puberulous, outer margin glabrous or hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1.5–2 mm long, obtuse. Leaf-blades filiform, convolute, 15–50 cm long, 1–2.5 mm wide, stiff, dark green. Leaf-blade surface ribbed, smooth, pubescent, densely hairy, hairy adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 20–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3.5–4.6 mm long, pubescent, pungent.


Flower and Fruit. Lodicules 3, 3 mm long. Anthers 3, 5.3–6.6 mm long, yellow. Stigmas 2.


Derivation (Clifford & Bostock 2007): Gk. pyknos, thick; stachys, ear of corn. Inflorescence a contracted panicle.


Sterile Spikelets. Basal sterile spikelets absent or rudimentary.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–12 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 10–12 mm long, membranous, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 3 mm long, coriaceous, without keel, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned.
Principal lemma awn geniculate, 30–40 mm long overall, with twisted column. Palea 1 length of lemma, without keels. Palea apex ciliate.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG).** Continent. Australasia.

**Country/Province/State.** Australia. Western Australia. South-West.


**Derivation** (Clifford & Bostock 2007): L. *ramus*, branch; -osa, abundance; -issima, most. Culms much branched.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Culms erect, 100–250 cm long, 0.5–7 mm diam., 6–9 -noded. Culm-internodes distally glabrous. Culm-nodes swollen. Lateral branches fastigiate. Leaves cauline. Leaf-sheaths glabrous on surface, outer margin glabrous. Ligule an eciliate membrane, 0.25–0.5 mm long, erose. Leaf-blades deciduous at the ligule, 35–40 cm long, 1–10 mm wide. Leaf-blade surface ribbed, scabrous, rough on both sides. Leaf-blade margins scabrous.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, 8–20 cm long, 2–4 cm wide. Primary panicle branches spreading, 3.5–5.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–10 mm long.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 2.3–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.2 mm long, pilose, acute. Floret callus hairs 0.25–0.5 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 2.3–3 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface scabrous. Lower glume apex erose, acute. Upper glume lanceolate, 2.4–2.8 mm long, membranous, without keels, 3 -veined. Upper glume surface smooth. Upper glume apex erose, acute.

**Florets.** Fertile lemma linear, subterete, 1.8–2.5 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface tuberculate, glabrous. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 17–30 mm long overall, with twisted column. Column of lemma awn 5–7 mm long. Palea 0.33 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Lodicules 2. Anthers 3, 1–1.3 mm long, anther tip penicillate. Stigmas 2. Caryopsis with adherent pericarp, 1.5–1.6 mm long. Embryo 0.25 length of caryopsis. Hilum linear, 0.33 length of caryopsis.

**Distribution (TDWG).** Continent. Australasia.

**Country/Province/State.** Australia. Queensland, New South Wales, Lord Howe-Norfolk Is. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.


TYPE from Australia. Basionym or Replaced Name: Stipa rudis Spreng., 4: Cur. Post. 31 (1827).


Derivation (Clifford & Bostock 2007): L. uncultivated. Species whose relatives are often cultivated.


Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Basal innovations extravaginal. Culms geniculately ascending, 60–120 cm long, 2–4 mm diam., firm, 2–4 -noded. Culm-internodes terete, smooth or scaberulous, distally pubescent. Culm-nodes swollen, pubescent. Lateral branches lacking. Leaf-sheaths inflated, ribbed, glabrous on surface or puberulous, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.5–2 mm long, scarious, pubescent on abaxial surface, truncate or acute. Collar pilose. Leaf-blades involute, 20–40 cm long, 2–5 mm wide. Leaf-blade surface ribbed, scabrous, rough abaxially, pubescent, densely hairy, hairy adaxially.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 0.8–3.2 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or oblong, 8–15 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume lateral veins ribbed. Lower glume surface asperulous, rough on veins, glabrous to pubescent. Lower glume apex erose, truncate or obtuse. Upper glume linear or oblong, 7–14.5 mm long, membranous, without keels, 3–5 -veined. Upper glume lateral veins ribbed. Upper glume surface asperulous, rough on veins, glabrous or pubescent. Upper glume apex erose, truncate or obtuse.

Florets. Fertile lemma linear or lanceolate, subterete, 5–11.5 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface tuberculate, rough above, pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 20–90 mm long overall, with twisted column. Middle segment of lemma awn 4–15 mm long. Column of lemma awn 4.5–30 mm long, glabrous or puberulous, with 0.05–0.3 mm long hairs. Palea 0.9 length of lemma, 2 -veined, without keels. Palea surface glabrous.

Flower and Fruit. Lodicules 2 or 3, 1–1.7 mm long. Anthers 3, 2–4 mm long. Stigmas 2. Caryopsis with adherent pericarp, 3–6 mm long. Embryo 0.2–0.25 length of caryopsis. Hilum linear, 0.7–0.8 length of caryopsis.

Country /Province /State. Australia, New Zealand (*). Queensland, New South Wales, A.C.T., Victoria, Tasmania. New Zealand North I, New Zealand South I.

South East. Coast, Tablelands, Western Slopes.


**TYPE** from Australia. **Basionym or Replaced Name:** *Stipa scabra* Lindl., *J. Trop. Australia* 31 (1848.). **T:<Type of Basionym>:** *fide* TROPICOS and Kew Synonomy Database: HT: Mitchell 125, 1846, Australia: New South Wales: Moora, on the Bogan River (CGE; IT: NSW).


**Derivation** (Clifford & Bostock 2007): L. rough or gritty to the touch. Plants with rough leaf-blades, spikelets or stems.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1–1.5 mm long, bearded, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–10 mm long, 1 length of upper glume, hyaline, without keels, 3 -veined. Lower glume apex acuminated. Upper glume lanceolate, 8–10 mm long, hyaline, without keels, 3–5 -veined. Upper glume apex acuminated.

**Florets.** Fertile lemma lanceolate, subterete, 4–5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface scabrous, puberulous. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 40–60 mm long overall, with twisted column. Column of lemma awn 10–12 mm long, glabrous. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG).** Continent: Europe (*), Australasia, Pacific. Region. Northern Europe (*).

**Country /Province /State.** : GB Aliens (Ryves et al). **Australia. New Zealand** (*). Western Australia, Northern Territory, South Australia, Queensland, New South Wales, A.C.T., Victoria, Tasmania. **South-central Pacific.** Easter Is. Hawaii (*).

Eremean, South-West. Central Australia. NW & Lake Eyre, Southern. Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.


**Derivation** (Clifford & Bostock 2007): L. semi-, half; barba, beard; -ata, possessing. Awn column hairy but bristle asperous.
**Classification.** Subfamily Pooideae. Tribe: Stipeae.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 17–24 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3.2–4.5 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 1 length of upper glume, membranous, purple, without keels, 3 -veined. Upper glume linear, 17–24 mm long, membranous, purple, without keels, 5 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 7–8 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 75–85 mm long overall, with twisted column. Column of lemma awn 35 mm long, plumose, hairy generally, with 0.3–1.6 mm long hairs. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Lodicules 3, 3 mm long. Anthers 3, 2.6–6 mm long. Stigmas 2.

**Distribution (TDWG).** Continent: Australasia. Country /Province /State: Australia. Western Australia, South Australia, New South Wales, Victoria, Tasmania.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, 40–80 cm long, 1 mm diam., 2–4 -noded. Culm-internodes ridged, distally glabrous or pubescent. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths tight, ribbed, smooth or scaberulous, outer margin glabrous. Ligule an eciliate membrane, 2–9 mm long, obtuse. Leaf-blades conduplicate or involute, 15–30 cm long, 0.5–1.5 mm wide. Leaf-blade surface ribbed, puberulous, hairy adaxially. Leaf-blade margins smooth or scaberulous.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 10–20 cm long, 1.5–3 cm wide. Primary panicle branches 1.5–4.5 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–7.5 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 9–15 mm long, breaking up at maturity,
disarticulating below each fertile floret. Floret callus elongated, 1.7–2.5 mm long, pubescent, acute. Floret callus hairs 0.1–1 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 9–15 mm long, 1.3–1.5 length of upper glume, hyaline, without keels, 3 -veined. Lower glume surface smooth or asperulous, rough at apex. Lower glume apex acuminate. Upper glume lanceolate, 7–10 mm long, hyaline, without keels, 5 -veined. Upper glume surface smooth or asperulous, rough at apex. Upper glume apex acuminate.

**Florets.** Fertile lemma oblanceolate, subterete, 5.5–7 mm long, coriaceous, black, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, with a median groove, pubescent. Lemma margins involute, interlocking with palea keels. Lemma hairs 0.4–0.8 mm long. Lemma apex with a short cylindrical neck, awned, 1 -awned. Principal lemma awn eccentric, bigeniculate, 25–40 mm long overall, with twisted column. Middle segment of lemma awn 5–7 mm long. Column of lemma awn 5–8 mm long, puberulous. Palea 1 length of lemma, 2 -veined. Palea keels contiguous above a sulcus.

**Flower and Fruit.** Lodicules 3, 0.4–1.5 mm long. Anthers 3, 2.1–2.3 mm long, anther tip smooth. Stigmas 2. Caryopsis with adherent pericarp, sulcate on hilar side, 2.5–3 mm long. Embryo 0.2–0.4 length of caryopsis. Hilum linear, 0.7–0.8 length of caryopsis.


**Derivation** (Clifford & Bostock 2007): Gk. -oides, resembling. With spikelets resembling those of *Stipa*.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 30–90 cm long, wiry, 3–4 -noded. Culm-internodes smooth. Culm-nodes flush with internodes. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 7 mm long. Leaf-blades erect, aciculate, involute, 20–70 cm long, 1 mm wide, stiff. Leaf-blade surface ribbed, puberulous, hairy adaxially. Leaf-blade apex pungent.

**Inflorescence.** Inflorescence a panicle. Panicle open, linear, 11–22 cm long, 2 cm wide, bearing few spikelets. Primary panicle branches 1–4 cm long, bearing 1–5 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 2–8 mm long, glabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 15–21 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2–2.6 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume lateral veins obscure. Lower glume apex attenuate. Upper glume lanceolate, 15–21 mm long, membranous, without keels, 5 -veined. Upper glume apex attenuate.
**Florets.** Fertile lemma lanceolate, subterete, 8.5–12.5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea, ciliate, hairy above. Lemma apex dentate, 2-fid, with lobes 1.4–3.6 mm long, awned, 1-awned. Principal lemma awn from a sinus, bigeniculate, 20–30 mm long overall, with twisted column. Column of lemma awn 10–14 mm long, puberulous, hairy on the spiral. Palea 1 length of lemma, without keels. Palea surface pubescent.

**Flower and Fruit.** Lodicules 3, 2 mm long. Anthers 3, 7.2–8.2 mm long. Stigmas 2.

**Distribution (TDWG).** Continent: Australasia.

**Country /Province /State.** Australia, New Zealand. South Australia, New South Wales, Victoria, Tasmania. New Zealand North I, New Zealand South I.

Southern. Coast.


**Derivation** (Clifford & Bostock 2007): L. tow, that is fibre for rope-making. Leaf-bases breaking into fibres.

**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial, short-lived, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with fibrous dead sheaths. Culms erect or geniculately ascending, 80–140 cm long, 2–3.5 mm diam., 3–5-noded. Culm-nodes pubescent. Leaf-sheaths pubescent, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliate membrane, 0.3 mm long. Leaf-blades convolute, 19–30 cm long, 2–5 mm wide, stiff. Leaf-blade surface ribbed, pubescent, hairy adaxially. Leaf-blade apex attenuate.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 17–35 cm long, 7 cm wide. Primary panicle branches 5–10 cm long. Panicle axis puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–8 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 18–24 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 3 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 18–24 mm long, 1.2 length of upper glume, membranous, without keels, 3-veined. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 15–20 mm long, membranous, without keels, 5-veined. Upper glume surface scabrous. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 7.6–11.5 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white. Lemma apex surmounted by a ring of hairs, with this appendage 1.5–3 mm long, awned, 1-awned. Principal lemma awn bigeniculate, 50–65 mm long overall, with twisted column. Column of lemma awn 19–36 mm long, hirsute. Palea 1 length of lemma, without keels. Palea surface pubescent.

**Flower and Fruit.** Lodicules 3, 1–3 mm long. Anthers 4–6 mm long. Stigmas 2.

**Distribution (TDWG).** Continent: Australasia.

**Country /Province /State.** Australia, New Zealand (*). South Australia, New South Wales, Victoria, Tasmania. New Zealand South I.

Southern. Coast, Western Plains.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–60 cm long. Ligule a ciliate membrane. Leaf-blades filiform, involute, 1–2 mm wide. Leaf-blade surface smooth or scaberulous, glabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 15 mm long, 1.2–1.3 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface asperulous. Upper glume apex acuminate. Upper glume lanceolate, 12 mm long, membranous, without keels, 5 -veined. Upper glume surface asperulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 8 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 50–70 mm long overall, with twisted column. Column of lemma awn 13 mm long, glabrous. Palea 1 length of lemma, without keels.

Flower and Fruit. Stigmas 2.


Country /Province /State. Australia. Western Australia, South Australia. South-West. Southern.


TYPE from Australia. Basionym or Replaced Name: Stipa trichophylla Benth., Fl. Austral. 7: 570 (1878). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Drummond 122, Australia: Western Australia (K (photo, CANB); IT: MEL-60010, MEL-60011).


Derivation (Clifford & Bostock 2007): Gk. thriz, hair; phyllon, leaf. Leaf-blades hair-like.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 20–40 cm long. Culm-nodes glabrous or pubescent. Leaf-sheaths smooth or scaberulous, glabrous on surface or hispid. Ligule a ciliate membrane. Leaf-blades filiform, involute, 1–2 mm wide. Leaf-blade surface hispid.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets lanceolate, subterete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, bearded, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex setaceously acuminate. Upper glume linear, 10 mm long, membranous, without keels, 5 -veined. Upper glume apex setaceously acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 5–6 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 40–50 mm long overall, with twisted column. Column of lemma awn 12–13 mm long, glabrous. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia, Northern Territory, South Australia, New South Wales, Victoria.

Eremean, South-West. Central Australia. NW & Lake Eyre, Southern. Western Plains.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Perennial. Culms 20–30 cm long, wiry. Culm-nodes pubescent. Leaf-sheaths pubescent. Ligule a ciliolate membrane, 3 mm long. Leaf-blades flat or involute, 2–4.5 mm wide. Leaf-blade surface pubescent.

**Inflorescence.** Inflorescence a panicle, deciduous as a whole. Panicle open, 8–12 cm long. Primary panicle branches spreading, whorled at most nodes, 4–5 cm long. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8 mm long, 1 length of upper glume, membranous, purple, without keels, 3 -veined. Lower glume surface glabrous. Lower glume apex acuminate. Upper glume lanceolate, 8 mm long, membranous, purple, without keels, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, subterete, 5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 30–35 mm long overall, with twisted column. Column of lemma awn glabrous. Palea 1 mm long, 0.2 length of lemma, without keels.

**Flower and Fruit.** Stigmas 2.

**Distribution (TDWG).** Continent. Australasia.

**Country /Province /State.** Australia. Western Australia, South Australia, New South Wales, Victoria. South-West. Southern. Western Slopes, Western Plains.


**TYPE** from Australia. **Basionym or Replaced Name:** *Stipa variabilis* D.K.Hughes, *Kew Bull.* 1921, 15 (1921). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *Drummond 961*, Australia:Western Australia (K (photo, CANB)); IT: *MELE-59987*.


**Derivation** (Clifford & Bostock 2007): *L. varius*, variable; *-obilis*, indicating capacity. As for *varia*.

**Classification.** Subfamily Pooideae. Tribe: *Stipeae*.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–80 cm long, 1–1.5 mm diam., 1–3 -noded. Culm-nodes glabrous or pubescent. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs scanty or lacking. Ligule a ciliolate membrane, 1–2 mm long. Leaf-blades flexuous, convolute, 9–25 cm long, 1–3 mm wide. Leaf-blade surface ribbed, glabrous or puberulous. Leaf-blade apex attenuate.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberete, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1–2 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, much thinner above, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 10–15 mm long, membranous, with hyaline margins, without keels, 5 -veined. Upper glume surface asperulous. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, suberete, 6–8 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma hairs white or tawny. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, recurved at base of limb, 50–70 mm long overall, with twisted column. Column of lemma awn 11–25 mm long, pubescent. Palea 1 length of lemma, without keels.

**Flower and Fruit.** Anthers 3, 2–2.6 mm long. Stigmas 2.

**Distribution (TDWG).** Continent: Europe (*), Africa, Australasia.

**Region. Northern Europe (*).**

**Country /Province /State.** : GB Aliens (Ryves et al). **Southern Africa.** Western Cape. **Australia.** Western Australia, South Australia. South-West. Southern.

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**Derivation** (Clifford & Bostock 2007): *L. velvety*. Plant in whole or in part covered with dense short hairs.

**Classification.** Subfamily Pooideae. Tribe: *Stipeae*.

Culm-nodes swollen, pubescent. Lateral branches lacking. Leaf-sheaths tight, ribbed, pubescent, outer margin hairy. Leaf-sheath oral hairs pubescent. Ligule a ciliolate membrane, 0.2–1 mm long, pubescent on abaxial surface, entire or erose, truncate or obtuse. Leaf-blades flat or convolute, 20–40 cm long, 2–3 mm wide, glaucous. Leaf-blade surface ribbed, puberulous, densely hairy, hairy on both sides.

**Inflorescence.** Inflorescence a panicle. Panicle contracted, linear, 15 cm long, 0.5–2 cm wide. Primary panicle branches 1–3.5 cm long. Panicle axis puberulous. Panicle branches puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 1–5 mm long, puberulous.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 9–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–2 mm long, pubescent, acute. Floret callus hairs 0.1–0.8 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–12 mm long, 1.2–1.4 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface pubescent. Lower glume apex acuminate. Upper glume lanceolate, 6.5–10 mm long, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute or acuminate.

**Florets.** Fertile lemma linear, subterete, 5–6.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface granulose, pubescent. Lemma margins convolute, covering most of palea. Lemma hairs 1–1.5 mm long. Lemma apex emarginate or acute, awned, 1 -awned. Principal lemma aawn bigeniculate, 30–45 mm long overall, with twisted column. Column of lemma awn 7–9 mm long, pubescent, with 0.1–0.3 mm long hairs. Palea 1 length of lemma, 2 -veined, without keels. Palea surface pubescent, hairy on back. Palea apex ciliate.

**Flower and Fruit.** Lodicules 2, 0.8–1.2 mm long. Anthers 3, 1–2 mm long, anther tip smooth. Stigmas 2. Caryopsis with adherent pericarp. Hilum linear.

**Distribution (TDWG).** Continent: Australasia.

**Country /Province /State.** Western Australia, South Australia. South-West. Southern.


**Derivation** (Clifford & Bostock 2007): L, whorl; -ata, possessing. Primary inflorescence branches whorled.

**Classification.** Subfamily Pooidae. Tribe: Stipeae.


**Inflorescence.** Inflorescence a panicle. Panicle open, lanceolate, 20–40 cm long. Primary panicle branches whorled at most nodes, 1–5 cm long, Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then
both fertile or the upper sterile. Spikelets elliptic, subterete, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent, obtuse.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2.5 mm long, 0.8 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 3 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma elliptic, subterete, 3 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex entire, awned, 1 -awned. Principal lemma awn 20–40 mm long overall, limb scabrous. Palea 0.5 length of lemma, 2 -veined, without keels.

**Flower and Fruit.** Lodicles 2, membranous. Anthers 3, 1.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: Europe (*), Australasia. Region: Northern Europe (*).

**Country /Province /State.** GB Aliens (Ryves et al). Australia, New Zealand (*). Queensland, New South Wales.


**Classification.** Subfamily Pooideae. Tribe: Stipeae.

**Habit, Vegetative Morphology.** Annual or perennial, caespitose. Culms 20–45 cm long, 2–2.5 mm diam., 1–2 -noded. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths loose, glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 2.5–8 mm long, lacerate. Leaf-blades flat or conduplicate, 9–18 cm long, 1.5–4 mm wide. Leaf-blade surface ribbed, puberulous, hairy adaxially.


**Fertile Spikelets.** Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 14–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.5–3 mm long, pubescent, acute.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 14–18 mm long, 1.3–1.5 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface asperulous, rough on veins, glabrous or pubescent, hairy between veins. Lower glume apex acuminate. Upper glume lanceolate, 9–14 mm long, membranous, without keels, 5 -veined. Upper glume surface asperulous, rough on veins, glabrous or pubescent, hairy between veins. Upper glume apex acuminate.

**Florets.** Fertile lemma linear, subterete, 6–7 mm long, coriaceous, dark brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma margins convolute, covering most of palea. Lemma apex scabrous, with a short cylindrical neck or surmounted by a ring of hairs, with this appendage 1–1.5 mm long (as to haira), awned, 1 -awned. Principal lemma awn straight or flexuous or bigeniculate,


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations extravaginal. Culms erect or geniculately ascending, 1.5–3 mm diam. Culm-internodes terete, distally pubescent or hirsute. Culm-nodes swollen, pubescent or hirsute, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.5–0.8 mm long, pilose on abaxial surface, truncate or obtuse. Leaf-blades flat or involute, 20–40 cm long, 1.5–2.5 mm wide. Leaf-blade surface ribbed, grooved adaxially, pubescent, hairy adaxially or on both sides. Leaf-blade margins scabrous.


Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, suberecte, 11–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pubescent, acute.


Florets. Fertile lemma oblanceolate, subereterete, 5.5–6.5 mm long, coriaceous, dark brown, without keel, more than 3-veined. Lemma lateral veins with distinct primaries but obscure intermediates. Lemma surface tuberculate, rough above, hirsute. Lemma margins convolute, covering most of palea. Lemma hairs white. Lemma apex dentate, 2 -fid, surmounted by a ring of hairs, with this appendage 2–2.5 mm long, awned, 1 -awned. Principal lemma aown from a sinus, bigenicate, 35–60 mm long overall, with twisted column, limb scabrous. Middle segment of lemma aown 8–15 mm long. Column of lemma aown 7–10 mm long, scabrous. Palea 1 length of lemma, coriaceous, without keels. Palea surface pubescent, hairy on back.

Flower and Fruit. Lodicules 2, 1 mm long. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, 3–4 mm long. Embryo 0.33 length of caryopsis. Hilum linear, 0.66–0.75 length of caryopsis.


Country /Province /State. Australia. New South Wales.
Avellinia michelii (Savi) Parl. Pl. Nouv. 59 (1842).


**Basionym or Replaced Name:** Bromus michelii Savi, Bot. Etr. 1: 78 (1808).


**Derivation** (Clifford & Bostock 2007): in honor of Pier Antonio Micheli (1679–1737) Italian botanist.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 7–30 cm long. Culm-internodes distally pubescent. Leaf-sheaths pubescent. Ligule an eciliate membrane, 0.5–1 mm long, truncate. Leaf-blades 2–5 cm long, 1 mm wide.


**Fertile Spikelets.** Spikelets comprising 2–4 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or cuneate, laterally compressed, 3–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pubescent. Floret callus glabrous.

**Glumes.** Glumes persistent, dissimilar, reaching apex of florets, shiny, gaping. Lower glume linear, 0.7–1.3 mm long, 0.25 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Upper glume apex acute. Upper glume elliptic, 3–5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

**Florets.** Fertile lemma linear, 3–5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 1–2 mm long overall. Palea gaping, 0.5 length of lemma, hyaline.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 0.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

\[ n = 7 \] (1 ref TROPICOS). \[ 2n = 14 \] (1 ref TROPICOS).

**Distribution (TDWG).** Continent, Europe, Africa, Temperate Asia, and Australasia.

**Region.** Southwestern Europe and Southeastern Europe.

**Country /Province /State.** Baleares, Corsica, France, Portugal, Sardinia, Spain. : Greece, Italy, Crete, Sicily. Northern Africa and Macaronesia. Morocco. Canary Is. Western Asia. Cyprus, East Aegean Is, Lebanon-Syria, Turkey. Australia (*). Western Australia (*), South Australia (*), Victoria (*).

Ereman, South-West. Southern.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ica, belonging to. From Abyssinia, now Ethiopia.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 70–100 cm long, 4 -noded. Lateral branches lacking. Ligule an eciliate membrane, 5–10 mm long, erose. Leaf-blades 15–30 cm long, 6–11 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex attenuate.

**Fertile Spikelets.** Spikelets comprising 2–4 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 20–25 mm long, persistent on plant. Rachilla internodes pilose, with 1–2 mm long hairs. Floret callus evident, bearded, obtuse.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 20–25 mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume elliptic, 20–25 mm long, 1.3 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 15–18 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface scaberulous, rough above or on veins. Lemma margins ciliate or ciliate. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 36 mm long overall, with twisted column. Column of lemma awn 10–13 mm long. Lateral lemma awns present, arising on apex of lobes, 2–3 mm long, shorter than principal. Palea keels winged, narrowly winged, ciliolate.

**Flower and Fruit.** Anthers 3, 2 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, 7–8 mm long, hairy all over. Hilum linear.

2n = 28 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia.


**TYPE** from Russia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Elets: Romanovsky-Romanko 580 (WIR holo).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): *L. aemulor*, come near to. Rather similar to another species.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending or decumbent, 30–120 cm long. Leaves cauline. Ligule an eciliate membrane. Leaf-blades 10–45 cm long, 4–18 mm wide.


**Fertile Spikelets.** Spikelets comprising 2–5 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 20–25 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rachilla internodes 1.5 mm long. Floret callus elongated, 2–3.5 mm long, obtuse, disarticulating obliquely, with circular scar.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 0.75–0.9 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume lanceolate, 1.2–1.4 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 15–20 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 20–30 mm long overall, with twisted column. Column of lemma awn pubescent.

**Flower and Fruit.** Anthers 3, 2–2.5 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp, hairy all over. Hilum linear.

**Distribution (TDWG).** Continent. Europe.

**Region.** Eastern Europe.

**Country /Province /State.** Central European Russia, East European Russia.


**Illustrations (Journals):** Ruzia (13:150, Fig 16 e-g (1993)).


**Derivation** (Clifford & Bostock 2007): L. bearded, barbed. With hairs on the callus, glumes or lemma.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, culms solitary or caespitose. Culms erect or geniculately ascending, 30–100 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths pilose. Ligule an eciliate membrane, 1–6 mm long, obtuse. Leaf-blades 6–30 cm long, 2–20 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, effuse, nodding, 15–30(–50) cm long, 6–12 cm wide. Primary panicle branches 9–18 cm long. Panicle branches smooth or scaberulous. Spikelets pendulous, solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 16–26 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pilose. Floret callus evident, bearded, obtuse. Floret callus hairs 2–3 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 16–26 mm long. 1 length of upper glume, membranous, without keels, 5(–7) -veined. Lower glume apex acuminate. Upper glume elliptic, 16–26 mm long, 1.3 length of adjacent fertile lemma, membranous, without keels, 7(–9) -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 12–20 mm long, coriaceous, much thinner above, without keel, 9 -veined, more than 3-veined. Lemma surface scabrous, rough above, pilose, hairy below. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 30–60 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 3–12 mm long, shorter than principal. Palea 10–18 mm long. Palea keels ciliolate.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, hairy all over. Hilum linear.

\[n = 14\] (3 refs TROPICOS), or 21 (1 ref TROPICOS). \[2n = 14\] (2 refs TROPICOS), or 28 (4 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America, South America.
Region. Northern Europe (*), Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.

Country /Province /State. : Great Britain. : Austria, Germany. : Baleares, Corsica, France, Portugal, Sardinia, Spain. : Albania, Bulgaria, Greece, Italy, Crete, Romania, Sicily, Turkey Europe, Yugoslavia. Krym. Northern Africa, Macaronesia, Southern Africa (*). Egypt, Libya. Azores, Canary Is, Madeira. Western Cape, Eastern Cape. Middle Asia, Caucasus, Western Asia, Arabian Peninsula, China. Turkmenistan, Tadzhikistan. Afghanistan (as subsp. wiestii), Cyprus (as subsp. wiestii), Iran, Iraq, Lebanon-Syria (as subsp. wiestii), Palestine, Israel & Jordan (as subsp. wiestii), Sinai (as subsp. barbata), Turkey (as subsp. wiestii). Kuwait, Oman, Saudi Arabia. Indian Subcontinent. Nepal (as subsp. barbata), Pakistan, Sri Lanka. Australia (*), New Zealand (*). Western Australia (*), South Australia (*), New South Wales (*), A.C.T. (*), Victoria (*), Tasmania (*), Lord Howe-Norfolk Is (*). New Zealand North.

North-central Pacific. Hawaii (*).

Northwest USA, Southwestern USA, Mexico. Oregon, Washington. Arizona, California. Central Mexico, Pacific Is (Mexico). Western South America, Brazil, Southern South America. Bolivia. Brazil South. Argentina Northeast, Argentina South, Chile North, Chile Central, Chile South, Juan Fernandez Is.


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 20–30 mm long, persistent on plant. Rachilla internodes pilose. Floret callus evident, pilose.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 13–20 mm long, 0.66 length of upper glume, membranous, without keels, 3–4 -veined. Lower glume apex acuminate. Upper glume elliptic, 20–30 mm long, 1.3 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 12–20 mm long, coriaceous, much thinner above, pallid, without keel, 9 -veined, more than 3-veined. Lemma surface pilose. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 30–40 mm long overall, with twisted column. Column of lemma awn pubescent. Lateral lemma awns present, arising on apex of lobes, 2–6 mm long, shorter than principal. Palea keels ciliolate.


Country /Province /State. Northern Africa. Libya.


IT: s. n., 1809, Germany (LE). Exhortulo nostro.

IT: Unknown s.n., unknown (L).

Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1–3 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets to of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 11–15 mm long, persistent on plant. Rhachilla internodes glabrous.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 11–15 mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex obtuse or acute. Upper glume elliptic, 11–15 mm long, 1.3–1.6 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex obtuse or acute.

Florets. Fertile lemma lanceolate, 8–9 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn subapical or dorsal, arising 0.75–0.9 way up back of lemma, geniculate, 15–28 mm long overall, with twisted column. Column of lemma awn 4–10 mm long. Lateral lemma awns present, arising on apex of lobes, 1–3 mm long, shorter than principal. Palea 7–8 mm long. Palea keels ciliolate, adorned above, Rhachilla extension 2.5 mm long.

Flower and Fruit. Anthers 3, 2 mm long. Ovary pubescent on apex. Caryopsis with adherent pericarp, oblong, sulcate on hilar side, 6 mm long, hairy at apex. Hilum linear. 2n = 14 (1 ref TROPICOS)


Region. Northern Europe, Middle Europe, Southwestern Europe.


T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: T: (B).


Derivation (Clifford & Bostock 2007): Gk. -ina, belonging to. From Byzantium, now Istanbul, Turkey.


**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 27–30 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus evident, bearded, obtuse, fracturing irregularly, with elliptic scar. Floret callus hairs 3–5.5 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 25–30 mm long, 1 length of upper glume, membranous, without keels, 7–veined. Lower glume apex acuminate. Upper glume elliptic, 28–33 mm long, 1.5–1.8 length of adjacent fertile lemma, membranous, without keels, 9–veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 15–20 mm long, coriaceous, much thinner above, without keel, 7–veined, more than 3-veined. Lemma apex dentate, 2–fid, with lobes 1.5 mm long, awned, 1–awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight or curved, 25–33 mm long overall, without a column. Palea 12–15 mm long. Palea keels ciliolate.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, hairy all over. Hilum linear.

\[ n = 21 \text{ (3 refs TROPICOS), } 2n = 40 \text{ (1 ref TROPICOS).} \]

**Distribution (TDWG).** Continent: Europe, Africa, Temperate Asia, Australasia (*), Tropical Asia, South America.

Region: Northern Europe (*), Northwestern Europe, Southeastern Europe.


**Basionym or Replaced Name:** *Avena nuda* var. *chinensis* Fisch. ex Roem. & Schult., *Syst Veg.* 2:669 (1817).

**Illustrations (Books):** S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 443).

**Derivation** (Clifford & Bostock 2007): *L.*-ense, denoting origin. From China.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


**Fertile Spikelets.** Spikelets comprising 3–6 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 25–35 mm long, persistent on plant. Rhachilla internodes glabrous. Floret callus glabrous.

**Glumes.** Glumes similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume lanceolate, 15–25 mm long, 1 length of upper glume, membranous, without keels, 7–9–veined. Lower glume apex acuminate. Upper glume lanceolate, 15–25 mm long, 0.9–1 length of adjacent fertile lemma, membranous, without keels, 7–9–veined. Upper glume apex acuminate.

**Florets.** Fertile florets all alike or with the lowest dissimilar. Lowest fertile lemma muticous or awned (15–20 mm). Fertile lemma lanceolate, 18–25 mm long, membranous, without keel, 7–9–veined, more than 3-veined. Lemma lateral veins distinct. Lemma surface glabrous. Lemma apex dentate, 2–4–fid, muticous.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, 8 mm long, hairy all over. Hilum linear. Disseminule comprising a caryopsis.

**Distribution (TDWG).** Continent: Europe, Temperate Asia.

Region: Middle Europe, Northwestern Europe, Eastern Europe.


**TYPE** from Algeria. T:<Type of Basionym>: fide TROPICOS and Kew Synonymy Database: Mascara: Durieu (P lecto).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, culms solitary or caespitose. Culms erect or geniculately ascending, 13–60 cm long. Culm-internodes glaucous. Lateral branches lacking. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane, 1.8 –3 mm long, obtuse. Leaf-blades 3–10 cm long, 2–4 mm wide. Leaf-blade surface glabrous or pilose.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, nodding, 6–15 cm long, 4–6 cm wide. Spikelets pendulous, solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

**Fertile Spikelets.** Spikelets comprising 3–5 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 18–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, obtuse, disarticulating obliquely. Floret callus hairs 4–4.5 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 11–15 mm long, 0.5–0.66 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminulate. Upper glume elliptic, 20–25 mm long, 1–1.3 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acuminulate.

**Florets.** Fertile lemma lanceolate, 20 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface glabrous or pilose, hairy above. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, geniculate, 30 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 7 mm long, shorter than principal. Palea keels ciliolate.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, hairy all over. Hilum linear.

2n = 14 (2 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia.

Region. Southeastern Europe.

**Country /Province /State.** : Bulgaria, Greece, Turkey Europe. Northern Africa. Algeria, Morocco, Tunisia. Middle Asia, Caucasus, Western Asia. Turkmenistan, Tadzhikistan. Iran, Iraq.


**Illustrations (Books):** N.Feinbrun-Dothan, Flora Palaestina 4 (1986) (Pl. 247), S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 442).
**Derivation** (Clifford & Bostock 2007): Gk. erion, wool; anthos, flower. With woolly glumes, lemmas or awns.

**Classification.** Subfamily Pooideae. Tribe: Pooae.

**Habit, Vegetative Morphology.** Annual. Culms solitary or caespitose. Culms erect or geniculately ascending, 13–60 cm long. Culm-internodes glaucous. Lateral branches lacking. Leaf-sheaths glabrous on wide. Leaf-blade surface glabrous or pilose.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, nodding, 6–15 cm long, 4–6 cm wide. Spikelets pendulous, solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 18–25 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus hairs 4–4.5 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 11–15 mm long, 0.5–0.66 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume el liptic, 20–25 mm long, 1–1.3 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 20 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface glabrous or pilose, hairy above. Lemma apex dentate. 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, geniculate, 30 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 7 mm long, shorter than principal. Palea keels ciliolate.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, hairy all over. Hilum linear. 

2n = 14 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia.

**Region. Southeastern Europe.** Eastern Europe.


**Avena fatua** Linn. Sp. Pl. 80 (1753).


sterile. Spikelets cuneate, laterally compressed, 18–28 mm long, breaking up at maturity, disarticulating of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper

- noded. Leaves cauline. Ligule an eciliate membrane, 4–6 mm long. Leaf-blades 10–45 cm long, 3–15 mm wide. Leaf-blade surface scaberulous.


Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 18–28 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, obtuse, disarticulating obliquely. Floret callus hairs 0.2 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 18–28 mm long, 1 length of upper glume, membranous, without keels, 7–11 -veined. Lower glume apex acuminate. Upper glume lanceolate, 18–28 mm long, 1.2–1.4 length of adjacent fertile lemma, membranous, without keels, 7–11 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 14–20 mm long, coriaceous, much thinner above, dark brown, without keel, 7–9 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma apex dentate, 2–4 -fid, with irregular lobes, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 25–40 mm long overall, with twisted column. Palea keels ciliate.

Flower and Fruit. Anthers 3, 3 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp, 6–8 mm long, hairy all over. Hilum linear.

n = 21 (7 refs TROPICOS), 2n = 2 (1 ref TROPICOS), or 42 (16 refs TROPICOS).


Region. Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


Illustrations: None found.


TYPE from Algeria. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Oran: Durieu (P lecto).


Derivation (Clifford & Bostock 2007): L. longus, long; gluma, husk. Spikelets with long glumes and or lemma.


Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 25–40 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus elongated, 5 mm long, bearded, acute, disarticulating obliquely, with linear scar.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 25–40 mm long, 1 length of upper glume, membranous, without keels, 9–11 -

**Florets.** Fertile lemma lanceolate, 20–35 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 40–60 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 10–15 mm long, shorter than principal. Palea keels ciliolate. Palea surface smooth or scaberulous.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, hairy all over. Hilum linear.

2n = 14 (4 refs TROPICOS).


**Region.** Southwestern Europe.

**Country /Province /State.** : Portugal, Sardinia, Spain. **Northern Africa.** Algeria, Egypt, Libya, Morocco, Tunisia. **Western Asia.** Palestine, Israel & Jordan.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating location. From Morocco.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 50–100 cm long. Lateral branches lacking. Ligule an eciliate membrane, acute. Leaf-blades 15–30 cm long, 2–5 mm wide.


**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 30–40 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus evident, bearded, obtuse, disarticulating transversely or disarticulating obliquely, with circular scar or elliptic scar.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 30–40 mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume elliptic, 30–40 mm long, 1.3 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 20–30 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface villous. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 20–30 mm long overall, with twisted column. Palea keels ciliolate. Palea surface pubescent, hairy on back.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, hairy all over. Hilum linear.

2n = 28 (1 ref TROPICOS).

**Distribution (TDWG). Continent.** Africa.

**Country /Province /State.** Northern Africa. Morocco.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of H.C. Murphy (fl. 1968) United States plant breeder.

**Classification.** Subfamily Pooideae. Tribe: Poeae.


Fertile Spikelets. Spikelets comprising 2–4 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 30–40 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus evident, bearded, obtuse, disarticulating transversely or disarticulating obliquely, with circular scar or elliptic scar.


Florets. Fertile lemma lanceolate, 20–30 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 40–60 mm long overall, with twisted column. Palea keels ciliolate. Palea surface scabrous.


Avena nuda Linn. Demonstr. Pl. 3 1753.


T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: LT: (LINN-95.8). LT designated by Cope in Cafferty et al., Taxon 49(2): 247 (2000); the earlier lectotypification by Baum (1974, 1978) is ineffective because it was based on an ineligible S specimen [see Cafferty et al., Taxon 49(2): 247 (2000)].

Illustrations (Books): S-L Chen et al, Flora of China, Illustrations, Poaceae (2007) (Fig. 445).


Fertile Spikelets. Spikelets comprising 2–4 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 20–25 mm long, persistent on plant. Floret callus glabrous.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 20–30(–35) mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume lanceolate, 15–20 mm long, 0.8–1 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 15–20 mm long, coriaceous, much thinner above, without keel, 7–9 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex dentate, 2 -fid, with lobes 1–3(–4) mm long, lobes acuminate, awned, 1 -awned. Principal lemma awn dorsal, curved, 15–20 mm long overall. Palea 0.5 length of lemma.


$2n = 42$ (5 refs TROPICOS).

Region. Northern Europe (*), Middle Europe, Eastern Europe.
Country/Province/State.: GB Aliens (Ryves et al), Belarus, Ukraine, Siberia, China, Russia. China South Central.
Hubei, Yunnan (+).

Avena occidentalis Durieu.

Illustrations: None found.
Derivation (Clifford & Bostock 2007): L. prostrerno, throw to the ground. Culms creeping or wiry so as to fall on the ground.
Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous, disarticulating obliquely.
Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 12–15 mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume lanceolate, 12–15 mm long, 1–1.1 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.
Florets. Fertile lemma lanceolate, 11–15 mm long, coriaceous, much thinner above, yellow or grey, without keel, 7 -veined, more than 3-veined. Lemma surface pilose. Lemma apex dentate, 2–4 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 20–35 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2–4 mm long, shorter than principal. Palea keels ciliolate.
2n = 14 (1 ref TROPICOS).
Distribution (TDWG). Continent. Europe.
Region. Southwestern Europe.
Country/Province/State.: Spain.


**Classification.** Subfamily Pooideae. Tribe: Poeeae.

**Habit, Vegetative Morphology.** Annual. Culms erect, 40–180 cm long. Leaves cauli ne. Ligule an eciliate membrane, 3–6 mm mm long. Leaf-blades 14–40 cm long, 5–15 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex acuminate.


**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 22–27 mm long, persistent on plant. Floret callus glabrous, disarticulating obliquely.

**Glumes.** Glumes similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 22–27 mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume lanceolate, 22–27 mm long, 1.5–1.6 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

**Floreths.** Fertile lemma lanceolate, 15–17 mm long, coriaceous, much thinner above, without keel, 7–9 -veined, more than 3-veined. Lemma surface scabrous, rough above, glabrous. Lemma apex dentate, 2 -fid, muticus or awned, 0–1 -awned. Principal lemma aawn dorsal, arising 0.5 way up back of lemma, geniculate, 25–35 mm long overall, with twisted column. Palea keels ciliate.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, hairy all over. Hilum linear.

n = 5 (5 refs TROPICOS). 2n = 40 (1 ref TROPICOS), or 41 (1 ref TROPICOS), or 42 (8 refs TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America, South America.

**Region.** Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


Illustrations: None found.


Habit, Vegetative Morphology. Annual, caespitose, clumped densely. Culms erect or geniculately ascending, 7–25 cm long. Culm-nodes glabrous. Laterals branches lacking. Ligule an eciliate membrane, 0.3–1 mm long. Leaf-blades 3–6 cm long, 0.5–1.5 mm wide. Leaf-blade surface scabrous.


Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 15–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Rachilla internodes pilose. Floret callus evident, bearded, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 15–18 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume elliptic, 15–18 mm long, 1.7–1.8 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 9–10 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface scabrous, rough above, pilose, hairy below. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 15–30 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 3–4 mm long, shorter than principal. Palea keels ciliolate.


Distribution (TDWG), Continent. Europe.

Region. Southeastern Europe.

Country /Province /State. : Sicily.
Avena sterilis


Derivation (Clifford & Bostock 2007): L. sterile. The spikelets fall soon after attaining maturity.


Fertile Spikelets. Spikelets comprising 2–5 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 23–50 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus evident, bearded, obtuse, disarticulating obliquely. Floret callus hairs 0.15 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gapin. Lower glume lanceolate, 23–50 mm long, 1 length of upper glume, membranous, without keels, 7–11 -veined. Lower glume apex acuminate. Upper glume lanceolate, 23–50 mm long, 1.2–1.4 length of adjacent fertile lemma, membranous, without keels, 7–11 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 15–40 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface scaberulous, rough above, pilose, hairy below. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 30–80 mm long overall, with twisted column. Column of lemma awn hispidulous to pubescent. Palea keels ciliate.

Flower and Fruit. Anthers 3, 2.5–4 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp, 11–12 mm long, hairy all over. Hilum linear.

n = 21 (1 ref TROPICOS). 2n = 42 (5 refs TROPICOS).

Region. Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


Derivation (Clifford & Bostock 2007): L. covered with short, bristle-like hairs. One or more organs covered with bristle-like hairs.


Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 60–120 cm long, 3–5 -noded. Leaves cauline. Ligule an eciliate membrane, 2–5 mm long. Leaf-blades 8–25 cm long, 5–10 mm wide. Leaf-blade surface scaberulous.


Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 17–26 mm long, persistent on plant. Floret callus glabrous, disarticulating obliquely.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 17–26 mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume lanceolate, 17–26 mm long, 1.5–1.6 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 10–17 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lower lemma surface scaberulous, rough above, glabrous or pilose, hairy all along or above (when hairy). Lemma apex dentate, 2–4 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 20–35 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 3–9 mm long, shorter than principal. Palea keels ciliolate.
**Flower and Fruit.** Anthers 3, 2.5–4 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp, hairy all over. Hilum linear.

\[ n = 8 \text{ (1 ref TROPICOS).} \]
\[ 2n = 14 \text{ (8 refs TROPICOS).} \]

**Distribution (TDWG).** Continent. Europe, Africa, Australasia (*), South America.

**Region.** Northern Europe. Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.

**Country /Province /State.** : Denmark, Finland, Great Britain, GB Aliens (Ryves et al), Norway, Sweden. : Austria, Belgium, Czechoslovakia, Germany, Hungary, Netherlands, Poland, Switzerland. : France, Portugal, Spain. : Greece, Italy, Yugoslavia. Belarus, Estonia, Latvia, Lithuania, Baltic States, Central European Russia, North European Russia, Northwest European Russia, Ukraine. **Macaronesia.** Azores. **Australia ( *), New Zealand ( *).** Victoria (*), Tasmania (*). New Zealand North I, New Zealand South I. **Brazil, Southern South America.** Brazil Southeast, Brazil South. Argentina Northeast, Argentina South, Chile Central, Chile South.


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 80–110 cm long, 3–5 -noded. Lateral branches lacking. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane, 4–7 mm long, erose. Leaf-blades 15–30 cm long, 5–10 mm wide. Leaf-blade surface scaberulous, glabrous or puberulous.


**Fertile Spikelets.** Spikelets comprising 2–3 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 18–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pilose, with 2–3 mm long hairs. Floret callus evident, bearded, obtuse, disarticulating transversely, with circular scar. Floret callus hairs 1–5 mm long.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gapng. Lower glume lanceolate, 18–25 mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume elliptic, 18–25 mm long, 1.5 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 12–15 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma surface scaberulous, rough above or on veins, glabrous or pilose. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 20–30 mm long overall, with twisted column. Column of lemma awn 8–12 mm long. Lateral lemma awns present, arising on apex of lobes, 1–2 mm long, shorter than principal. Palea keels winged, narrowly winged, ciliolate.

**Flower and Fruit.** Anthers 3, 1–2 mm long. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, 6 mm long, hairy all over. Hilum linear.

\[ 2n = 28 \text{ (1 ref TROPICOS).} \]

**Distribution (TDWG).** Continent. Africa.

**Country /Province /State.** Northeast Tropical Africa. Eritrea, Ethiopia (inc. Eritrea).


**Illustrations (Books):** N.L.Bor, *Gramineae* in *Flora of Iraq* (1968) (331, Pl. 121).


**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms erect or geniculately ascending, 30–60 cm long. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades 4–8 cm long, 2–3 mm wide. Leaf-blade surface pilose.

**Inflorescence.** Inflorescence a panicle. Panicle open, elliptic, nodding, 10–20 cm long. Primary panicle branches indistinct the panicle almost racemose, bearing 1 fertile spikelets on each lower branch. Spikelets pendulous, solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

**Fertile Spikelets.** Spikelets comprising 2 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 25–30 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus elongated, 6–7 mm long, pubescent, pungent.

**Glumes.** Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 25–30 mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume elliptic, 25–30 mm long, 2–2.5 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 10–15 mm long, coriaceous, much thinner above, without keel, 7 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 30–35 mm long overall, with twisted column. Column of lemma awn puberulous. Lateral lemma awns present, arising on apex of lobes, 7 mm long, shorter than principal. Palea keels ciliolate.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, hairy all over. Hilum linear.

2n = 14 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Africa, Temperate Asia.

**Country /Province /State.** Northern Africa. Algeria, Libya. Caucasus, Western Asia, Arabian Peninsula. Iran, Iraq.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From the Volga River, former Soviet Union.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 60–150 cm long. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades 15–30 cm long, 2–6 mm wide. Leaf-blade surface glabrous.


**Fertile Spikelets.** Spikelets comprising 3–4 fertile florets, with a barren rachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 20–25 mm long, breaking up at maturity, disarticulating
below each fertile floret. Rhachilla internodes 0.5 mm long. Floret callus evident, 1 mm long, obtuse, fracturing irregularly.

**Glumes.** Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 20–25 mm long, 1 length of upper glume, membranous, without keels, 7 -veined. Lower glume apex acuminate. Upper glume elliptic, 20–25 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, without keels, 9 -veined. Upper glume apex acuminate.

**Florets.** Fertile lemma lanceolate, 14–18 mm long, coriaceous, much thinner above, without keel, 7 -veined. Lemma lateral veins absent or obscure below. Lemma apex dentate, 2–4 -fid, muticous.

**Flower and Fruit.** Anthers 3. Ovary pubescent all over. Caryopsis with adherent pericarp, sulcate on hilar side, hairy all over. Hilum linear. Disseminule comprising a floret.

**Distribution (TDWG).** Continent: Europe.

**Region.** Eastern Europe.

**Country /Province /State.** Central European Russia, East European Russia, South European Russia.


**Derivation** (Clifford & Bostock 2007): awn flexuous.

**Classification.** Subfamily Pooideae. Tribe: Poeae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or elongated. Culms erect, 20–200 cm long, wiry, 1–3 -noded. Leaves mostly basal. Leaf-sheaths smooth or scabrous. Ligule an eciliate membrane, 0.5–3 mm long, obtuse. Leaf-blades filiform, involute, 5–20 cm long, 0.3–0.8 mm wide, stiff. Leaf-blade apex abruptly acute or acute.


**Fertile Spikelets.** Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or cuneate, laterally compressed, 4–6 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes definite, pilose. Floret callus pilose.

**Glumes.** Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume ovate, 3–5 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acute. Upper glume elliptic, 4–6 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume apex smooth or asperulous. Upper glume apex acute.
**Florets.** Fertile lemma oblong, 3.5–5.5 mm long, membranous, shiny, without keel, 4 -veined, more than 3-veined. Lemma apex erose, truncate or obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.2 way up back of lemma, geniculate, 4–7 mm long overall, with twisted column. Palea keels scaberulous. Rhachilla extension 0.3–0.4 length of fertile floret, pilose.

**Flower and Fruit.** Lodicules 2, membranous. Anthers 3, 2–3 mm long. Ovary glabrous. Caryopsis with adherent pericarp, 2–2.5 mm long. Hilum punctiform.

2n = 28 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia, North America, South America, Antarctica.

**Region.** Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe, Eastern Europe.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Amapa, Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations flabellate. Culms erect, robust, 75–150 cm long. Culm-nodes pubescent. Lateral branches ample. Leaves cauliine. Leaf-sheaths 4–30 cm long, keeled, outer margin hairy. Ligule a ciliolate membrane, 0.7 mm long. Collar pubescent. Leaf-blades persistent or deciduous at the ligule, 5–20 cm long, 5–8 mm wide, firm. Leaf-blade surface glabrous. Leaf-blade margins glabrous or ciliate. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, with 1–4 peduncles per sheath. Peduncle 30–70 cm long. Racemes 5–9, digitate, ascending or spreading, unilateral, 4–10 cm long. Central inflorescence axis 3–6 cm long. Rhachis angular, 0.3 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5–7 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, acute, 1.9 mm long, 0.6–0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 7 -veined. Upper glume surface puberulous, hairy between veins.
Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 5 -veined, prominently veined, pubescent, hairy at apex or at base. Fertile lemma 1.9 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil Northeast, Brazil North.
Para, Amapa, Maranhao, Piaui. Amapa, Amazonas.


Habit, Vegetative Morphology. Perennial. Culms erect, 60–200 cm long, 1–2 -node d. Culm-nodes pubescent. Leaves without demarcation between sheath and blade. Leaf-sheaths 13–30 cm long, hirsute. Ligule a ciliolate membrane, 1 mm long. Leaf-blades erect or ascending, persistent or deciduous at the ligule, conduplicate, 20–50 cm long, 5–10 mm wide, stiff. Leaf-blade surface scabrous, glabrous or hirsute. Leaf-blade apex obtuse, soon splitting or simple.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 15–75 cm long. Racemes numerous, 30–60, borne along a central axis, ascending, unilateral, 4–18 cm long. Central inflorescence axis 15–30 cm long. Rhachis angular, 0.3–0.5 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5.5–9 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile or pedicelled. Pedicels absent or present, reduced to a stump, 0–0.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, acute, 1.7–2 mm long, 0.7–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume surface pubescent, hairy between veins.

Flowers. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 5 -veined, pubescent, hairy between veins. Fertile lemma 1.5–2 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex obtuse or acute, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

n = 30 (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.


**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (504, Fig 112).

**Derivation** (Clifford & Bostock 2007): L. *-inus*, belonging to. From the Andes.

**Classification.** Subfamily Panicoideae. Tribe: Paspalaeae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Stolons present. Culms geniculately ascending, slender, 65–100 cm long. Culm-nodes glabrous. Leaf-sheaths 1–9 cm long, keeled. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blades flat or conduplicate, 3–18 cm long, 10–15 mm wide. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 20–45 cm long. Racemes 5–7, digitate, spreading, unilateral, 3–10 cm long. Rhachis angular, 0.4 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5 spikelets per cm. Raceme-bases brief, glabrous or pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.2–0.4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acute, 2.5–2.6 mm long, 0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, pallid, 2–4 -veined. Upper glume primary vein absent. Upper glume surface puberulous.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.2 length of fertile lemma, 1 length of spikelet, pallid, 2–4 -veined, without midvein, puberulous. Fertile lemma 2–2.1 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.


**TYPE** from Panama. *Basionym or Replaced Name: Paspalum appendiculatum* J. & C. Presl, *Rel. Haenk.* 1 : 211. (1830). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *T. Haenke* s.n., no date, Panama (PR; IT: US-2855284 (fragm)).

**Illustrations: None found.**


**Classification.** Subfamily Panicoideae. Tribe: Paspalaeae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Annual. Culms 20–90 cm long. Culm-nodes glabrous. Ligule a fringe of hairs. Leaf-blades conduplicate or involute, 7–26 cm long, 4–10 mm wide. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–12, digitate, unilateral, 2–5.5 cm long. Rhachis broadly winged, forming pockets, 1 mm wide, tuberculate on margins, setose on margins. Rhachis hairs yellow. Spikelet packing adaxial, regular, 2 -rowed. Spikelets sunken, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 1–1.5 mm long, falling entire.
Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume primary vein absent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, 2 -veined, without midvein, obtuse. Fertile lemma elliptic, 1–1.5 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. South America.
Country /Province /State. Mesoamerica, Caribbean, Northern South America, Brazil. Panama. Trinidad-Tobago. Venezuela. Brazil West Central, Brazil Northeast, Brazil South.


TYPE from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: A. Chase 9215, 30 Mar 1925, Brazil: Minas Gerais: Chapeo do Sol, Serra do Cipo (110 km NE of Belo Horizonte), 1000–1100 m, erect small tufts, rocky open slope (US-1256063).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. growing in the sunshine. Savanna or grassland species.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 30–40 cm long, 1–2 -noded. Culm-nodes glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths 3–10 cm long, wider than blade at the collar, without keel. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades curved, filiform, 5–10 cm long, 1 mm wide, stiff. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 15–20 cm long. Racemes 2–3, paired or digitate, ascending, unilateral, 3–7 cm long. Central inflorescence axis 0–1 cm long. Rhachis angular, 0.6 mm wide, glabrous on surface, glabrous on margins. Spikelet packing adaxial, 4–5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–0.3 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, subacute, 2.5 mm long, 0.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume length of spikelet, membranous, 4–5 -veined. Upper glume primary vein absent or distinct. Upper glume surface pilose, hairy between veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1–1.1 length of fertile lemma, 1 length of spikelet, 4–5 -veined, without midvein or with evident midvein, pilose, hairy between veins. Fertile lemma 2.3–2.5 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations flabellate. Culms slender, 45 cm long. 1 -noded. Culm-nodes glabrous. Leaf-sheaths 5–8 cm long. Ligule a ciliolate membrane, 0.4 mm long. Leaf-blades curled, conduplicate, 6–8 cm long, 1 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 24 cm long. Racemes 4, digitate, ascending, unilateral, 7–9 cm long. Rhachis angular, 0.3 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 6 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present, reduced to a stump, ciliate, hairy at base, with 0.5–1 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, obtuse, 1.7–1.8 mm long. 0.6–0.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume 0.9 length of spikelet, hyaline, 2 -veined. Upper glume primary vein absent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 0.9 length of fertile lemma, 0.9 length of spikelet, hyaline, 2 -veined, without midvein. Fertile lemma 1.7–1.8 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex without ornament. Palea involute, indurante.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, Flora Argentina 3 – 1, Aristidoideae a Pharoideae (2012) (263), E.G.Nicora, Los Generos de Gramineas de America Austral (1987) (479, Fig. 172 as var. glabriflorus), A.Burkat, Flora Ilustrada de Entre Rios (Argentina), Pt II, Gramineas (1969) (417, Fig. 175), F.O.Zuloaga et al, Flora del Paraguay 23 (1994) (30, Fig. 6), B.Rosengurtt, Gramineas Uruguaysl (1970) (282, Fig. 121 as ssp. argentinus & glabripes).

Derivation (Clifford & Bostock 2007): from Argentina.


Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Stolons absent or present. Culms slender, 50–120 cm long, 1–3 -noded. Culm-nodes glabrous. Leaf-sheaths 5–30 cm long, keeled. Ligule a ciliolate membrane, 0.4–0.6 mm long. Leaf-blades 10–30 cm long, 3–5 mm wide. Leaf-blade surface glabrous. Leaf-blade apex abruptly acute or acute, hooded.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 30–50 cm long. Racemes 3–10, digitate, ascending, unilateral, 10–18 cm long. Central inflorescence axis 2–4 cm long. Rhachis angular, 0.5–0.7 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5.5–7 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present, reduced to a stump, glabrous or ciliate, hairy at base, with 0.5–1.5 mm long hairs.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, subacute or acute, 2–2.8 mm long, 0.7–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2 -veined. Upper glume primary vein absent. Upper glume surface glabrous or puberulous, hairy on veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2 -veined, without midvein, glabrous or puberulous, hairy on veins. Fertile lemma 2–2.8 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Brazil, Southern South America. Brazil West Central, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.


**TYPE** from Mexico. T;fide TROPICOS and Kew Synonomy Database: HT: *Bro. Arshne* 6952, 17 Sep 1910, Mexico; Michoacan: Loma Santa Maria, vicinity of Morelia, 2050 m (US-1000427).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Gustav Joseph Brouard Arshne (1867–1938) cleric and botanist who collected in New Mexico, USA.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Culms erect or geniculately ascending, 15–75 cm long, 1–2 mm diam., 1–2 -noded. Culm-internodes elliptical in section. Culm-nodes pubescent. Leaves mostly basal. Leaf-sheaths 4–20 cm long. Ligule a ciliolate membr ane, 0.3–0.4 mm long. Leaf-blades ascending, 3–15 cm long, 5–8 mm wide. Leaf-blade surface pilose, densely hairy, hairy adaxially. Leaf-blade apex obtuse, soon splitting.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle straight or nodding. 30–60 cm long. Racemes 2–4, paired or digitate, ascending, unilateral, 4–12 cm long. Central inflorescence axis 0–3 cm long. Rachis angular, 0.5–0.7 mm wide, glabrous on surface, smooth on margins or scabrous on margins, glabrous on margins. Spikelet packing adaxial, 3–4 spikelets per cm. Raceme-bases brief, pubescent or pilose. Spikelets appressed, solitary. Fertile spikelets sessile or pedicelled. Pedicels absent or present, 0–0.3 mm long, tip cupuliform.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, 3–3.1 mm long, 1–1.1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, mid-green or purple, 3–5 -veined. Upper glume surface pubescent, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, pallid, 3–5 -veined, pubescent, hairy between veins. Fertile lemma ovate, 2.6–2.7 mm long, indurate, yellow, without keel. Lemma margins involute. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. North America, South America.

Axonopus aureus Beav. Agrost. 12 (1812).


Derivation (Clifford & Bostock 2007): L. golden-yellow. With spikelets or pedicels or other parts invested in golden-yellow hairs.


Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect or geniculately ascending, 30–110 cm long. Ligule a fringe of hairs. Leaf-blades (4–)6–26 cm long, 2–5 mm wide. Leaf-blade apex acute or acuminate.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 1.2–2.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblong, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume surface glabrous or puberulous, hairy in lines. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, 2 -veined, glabrous or puberulous, hairy in lines, obtuse. Fertile lemma oblong, 1–2 mm long, indurate, dark brown, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. 2n = 20 (1 ref TROPICOS).


Country /Province /State. Mexico. Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Puerto Rico, Trinidad-Tobago, French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North.


TYPE from Brazil. **Basionym or Replaced Name:** *Paspalum barbigerum* Kunth, *Rev. Gram.* 1: 24. (1829). 

**Basionym or Replaced Name:** *Paspalum barbigerum* Kunth, *Rev. Gram.* 1: 24. (1829). T:<Type of Basionym>:

**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (504, Fig. 112), S.A.Renvoize, *The Grasses of Bahia*, 1984 (196, Fig. 74), B.Rosengurtt, *Gramineas Uruguayas* (1970) (290, Fig. 120).

**Derivation** (Clifford & Bostock 2007): L. *barba*, beard; gero, carry. Spikelets each subtended by a fine rough bristle.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms slender, 50–90 cm long, 1–4 -noded. Culm-internodes terete. Leaf-sheaths without keel. Ligule a ciliate membrane, 0.2–0.3 mm long. Leaf-blades erect, curved, conduplicate or involute, 5–40 cm long, 2–7 mm wide, stiff. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 25–50 cm long. Racemes 4–30, borne along a central axis, ascending or spreading, unilateral, 5–15 cm long. Central inflorescence axis 3–15 cm long. Rhachis angular, 0.3–0.4 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 6–10 spikelets per cm. Raceme-bases brief, glabrous or pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–0.4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, obtuse or subacute, 1.6–2.1 mm long, 0.6–0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume lateral veins ribbed. Upper glume surface glabrous or puberulous, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 5 -veined, ribbed, glabrous or puberulous, hairy between veins. Fertile lemma 1.6–2.1 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America, Western South America, Brazil, Southern South America. Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Paraguay.


**TYPE** from Bolivia. T:<Type of Basionym>:

**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (497, Fig. 109).


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Annual. Culms erect or geniculately ascending, 20–45 cm long. Culm-nodes glabrous. Leaves basal and cauline. Leaf-sheaths keeled, glabrous on surface or pilose. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blade base truncate or broadly rounded. Leaf-blades linear or lanceolate, 5–14 cm long, 4–9 mm wide. Leaf-blade surface pilose. Leaf-blade apex acute or acuminate.

**Inflorescence.** Inflorescence composed of racemes, with 1–3 peduncles per sheath. Racemes 2–6, digitate, unilateral, 3–6 cm long. Spikelet packing adaxial, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets sessile.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 1.3–1.7 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 2–4 -veined. Upper glume primary vein absent. Upper glume margins ciliate.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of fertile lemma, 1 length of spikelet, membranous, 2–4 -veined, without midvein. Fertile lemma elliptic, 1.3–1.7 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

**Distribution (TDWG).** Continent. South America.
Country /Province /State. Western South America. Bolivia.


**Illustrations (Books):** S.A.Renvoize, Gramineas de Bolivia (1998) (492, Fig. 108), S.A.Renvoize, The Grasses of Bahia, 1984 (193, Fig. 73), L.B. Smith, D.C. Wasshausen, R.M. Klein Flora Illustrada Catarinensis Gramineas (1981–1982) (1105, Fig. 218), F.O.Zuloaga et al, Flora del Paraguay 23 (1994) (33, Fig. 7).

**Derivation** (Clifford & Bostock 2007): L. -ense, denoting origin. From Brazil.


**Habit, Vegetative Morphology.** Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms 20–60 cm long. Lateral branches lacking. Leaves mostly basal. Ligule a fringe of hairs. Leaf-blades flat or convolute, 10–23 cm long, 1–2 mm wide. Leaf-blade surface pilose, hairy adaxially. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex obtuse or acute.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 3–11 cm long. Rhachis angular, 0.3 mm wide, ciliate on margins. Rhachis hairs white. Spikelet packing adaxial, lax, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, ciliate.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acute, 2.5–4 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume lateral veins thickened. Upper glume surface villous, with tubercle-based hairs. Upper glume hairs white. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 5 -veined, with thickened veins, villous, with tubercle-based hairs, bearing white hairs, bearing hairs 1–4 mm long, acute. Fertile lemma ovate, 2–3 mm long, coriaceous, dark brown, without keel. Lemma margins involute. Lemma apex acute. Palea involute, coriaceous.

**Distribution (TDWG).** Continent. South America.
Country /Province /State. Western South America. Brazil. Southern South America. Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Paraguay.


Accepted by: W.D.Clayton & K.Harman, GrassBase (2008) and online.


Illustrations (Journals): Systematic Botany (31: 494 (2006)).


Habit, Vegetative Morphology. Annual, mat forming, clumped densely. Culms geniculately ascending, 3–6.5 cm long, 0.12 mm diam., 4–5 -noded. Culm-internodes distally glabrous. Culm-nodes purple, glabrous. Leaf-sheaths open for most of their length, 6–12 cm long, without keel, glabrous on surface. Ligule a fringe of hairs. Leaf-blades curved, filiform, conduplicate, 2–3 cm long, 0.2–0.3 mm wide. Leaf-blade venation with 3 secondary veins. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle 0.8–3 cm long, glabrous. Racemes 1, single, drooping, unilateral, 0.8–2 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 0.3–0.4 mm wide, terminating in a barren extension. Spikelet packing adaxial. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 1.4–1.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1.4–1.8 mm long, 1 length of spikelet, hyaline, without keels. Upper glume surface asperulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret unlike other scales, lanceolate, 1.5–2 mm long, 0.6–0.8 length of spikelet, hyaline, light brown, 2 -veined, without midvein, distinctly veined, ciliate on margins, fringed above and below, bearing hairs 0.2–0.9 mm long, emarginate, awned. Awn of lower sterile floret terminal (on one lobe), 4.5–6 mm long. Fertile lemma ovate, dorsally compressed, 1.2–1.3 mm long, membranous, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea 2 -veined. Palea apex dentate, 2 -fid.

Flower and Fruit. Anthers 2, 0.5–0.6 mm long. Caryopsis with adherent pericarp, oblong or ovoid, 0.7–0.8 mm long. Embryo 0.33–0.5 length of caryopsis. Hilum elliptic, 0.25 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country/Province/State. Brazil. Brazil West Central.

Goiás.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): In honor of Felisberto C. Camargo (c. 1887) Brazilian agriculturalist.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Cataphylls evident. Culms 20–35 cm long, 1 -noded. Culm-nodes pubescent. Leaves mostly basal. Leaf-sheaths 3–8 cm long, outer margin hairy. Ligule a ciliolate membrane, 0.2–0.3 mm long. Leaf-blades filiform or linear, involute, 5–15 cm long, 1 mm wide, firm. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acuminate, pungent.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 5–8 cm long. Racemes 2–4, paired or digitate, erect or ascending, unilateral, 8–12 cm long. Central inflorescence axis 1–3 cm long. Rhachis angular, 0.4–0.5 mm wide, drab, glabrous on surface, smooth on margins,
glabrous on margins. Spikelet packing adaxial, 3.5 spikelets per cm. Raceme-bases brief or linear, 0–15 mm long, pilose. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.3–0.4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, acute, 3.1–3.2 mm long, 1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5–7 -veined. Upper glume surface puberulous, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.2 length of fertile lemma, 1 length of spikelet, 7 -veined, pubescent, hairy between veins, with conspicuous apical hairs, bearing hairs 0.5 mm long. Fertile lemma 2.5–2.6 mm mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** South America.


**Illustrations (Books):** S.A.Renvoize, *Gramineas de Bolivia* (1998) (492, Fig. 108).

**Derivation** (Clifford & Bostock 2007): L. *canesco*, grow white. Leaf-blades or leaf-sheaths densely invested with white or grey hairs.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or short. Culms 30–100 cm long. Culm-internodes distally glabrous. Leaves cauline, without demarcation between sheath and blade. Leaf-sheaths outer margin glabrous or hairy. Ligule a ciliolate membrane, 0.2–0.7 mm long. Leaf-blades ascending, flat or conduplicate, 10–31 cm long, 2–8 mm wide. Leaf-blade surface glabrous or pilose, densely hairy, hairy adaxially.

**Inflorescence.** Inflorescence composed of racemes, with 1–3 peduncles per sheath. Peduncle 6–20 cm long, glabrous. Racemes 3–14(–22), digitate, unilateral, 6–14 cm long. Central inflorescence axis 1–4(–6) cm long. Rhachis angular, 0.7–0.8 mm wide, tuberculcate on margins, ciliate on margins. Rhachis hairs yellow, 2–3 mm long. Spikelet packing adaxial, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, ciliate.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, 1.3–1.7 mm long, 0.7–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of adjacent fertile lemma, 1 length of spikelet, membranous, yellow or light brown, without keels, 2–3 -veined. Upper glume primary vein absent or distinct. Upper glume surface glabrous or pubescent, hairy on veins. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of fertile lemma, 1 length of spikelet, membranous, yellow or light brown, 2–3 -veined, without midvein or with evident midvein, glabrous or pubescent, hairy on veins, obtuse. Fertile lemma elliptic, 1.3–1.7 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

**Distribution (TDWG). Continent.** South America.


**Illustrations (Books)**: S.A. Renvoize, *The Grasses of Bahia*, 1984 (196, Fig. 74), J.A. Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (58, Fig. 29).

**Derivation** (Clifford & Bostock 2007): L. *capillis*, a hair; -*are*, pertaining to. Inflorescence with filiform branches.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Annual, caespitose. Culms geniculately ascending or decumbent, weak, 20–40 cm long, 0.5–0.7 mm diam. Culm-internodes thin-walled. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 0.3–0.5 mm long. Leaf-blades linear or lanceolate, 1.5–7 cm long, 3–7 mm wide. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acute.

**Inflorescence.** Inflorescence composed of racemes. Peduncle 7–15 cm long. Racemes 2, paired, unilateral, 2–3.5 cm long. Rhachis angular, 0.3–0.5 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, 1.2–1.6 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 4 -veined. Upper glume primary vein absent. Upper glume surface puberulent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 2 -veined, without midvein, puberulous. Fertile lemma elliptic, 1.2–1.6 mm long, indurate, light brown, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

**Flower and Fruit.** Anthers 3, 0.4 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 1.1 mm long.

2n = 20 (1 ref TROPICOS).

**Distribution (TDWG).** Continent: South America.

**Country /Province /State.** Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Costa Rica, El Salvador, Guatemala, Honduras, Panama. Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North.


**TYPE** from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: Par? Maraba, Serra dos Carajas, n1, 25 km NW of camp at Serra Norte, aprox. 5.54S 50.27W, marshy area and nearby scrub on outcrop of ferrous rock, 13 Dec. 1981.

**Illustrations:** None found.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ensis, denoting origin. From Casiquiare Department, Venezuela.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, mat forming. Stolons present, with alternating elongated and bunched internodes. Culms 24–90 cm long, 1 mm diam., 1–2 -noded. Culm-internodes elliptical in section, thin-walled, distally glabrous. Culm-nodes glabrous or pubescent. Leaves without demarcation between sheath and blade. Leaf-sheaths 3–12 cm long, without keel, glabrous on surface. Leaf-sheath oral hairs ciliate, 1–3 mm long. Ligule a ciliolate membrane, 0.1–0.2 mm long. Leaf-blades flat or convolute, 7–60 cm long, 1–3 mm wide. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acute.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Racemes 2–3(–5), paired or digitate, erect or ascending or spreading, unilateral, 4–14.5 cm long. Central inflorescence axis 0.2–3 cm long. Rhachis angular, 0.3–0.5 mm wide, scaberulous on margins, glabrous on margins. Spikelet packing adaxial, 4–6 spikelets per cm, regular, 2 -rowed. Raceme-bases pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, obtuse, 2.7–3.7 mm long, 0.8–1.3 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, exceeding apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume lateral veins prominent. Upper glume surface glabrous to pubescent, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, 5–7 -veined, prominently veined, glabrous to pubescent, hairy between veins. Fertile lemma elliptic, 2.5–3.5 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Lodicles 2, fleshy, veined. Anthers 3, 1.5–2.2 mm long, purple. Caryopsis with adherent pericarp, ellipsoid or obovoid. Embryo 0.5 length of caryopsis. Hilum punctiform.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Stolons present. Basal innovations flabellate. Culms 30–60 cm long. Culm-internodes terete. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths 3–5 cm long. Ligule a ciliolate membrane, 1 mm long. Leaf-blades straight or curved, persistent or deciduous at the ligule (lower leaves), flat or conduplicate, 3–5 cm long, 2.5–3 mm wide, firm. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins tuberculate-ciliate, hairy at base. Leaf-blade apex abruptly acute, soon splitting or simple.

Inflorescence. Inflorescence composed of racemes, with 1–3 peduncles per sheath. Peduncle 10–35 cm long. Racemes 2–4, paired or digitate, ascending, unilateral, 3–9 cm long. Central inflorescence axis 0–1 cm long. Rachis angular, 0.3 mm wide, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial, 5–5.5 spikelets per cm. Raceme-bases brief, pilose. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, obtuse, 2.3–2.7 mm long, 0.6–0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, dark brown, 7 -veined. Upper glume surface pubescent, hairy between veins, with an apical beard. Upper glume hairs 0.5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, dark brown, 5–7 -veined, puberulous, hairy between veins. Fertile lemma 2.3–2.7 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Derivation (Clifford & Bostock 2007): L. centrum, centre of a circle; -ale, pertaining to. From Central America.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 35–80 cm long, 1.5–3 mm diam. Culm-internodes solid. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, keeled, outer margin hairy. Ligule a ciliolate membrane, 0.2–0.8 mm long. Collar pubescent. Leaf-blades 8–50 cm long, 8–13 mm wide. Leaf-blade surface pubescent, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Peduncle nodding, 10–27 cm long, pubescent above. Racemes 2–3, paired or borne along a central axis, unilateral, 7–13 cm long. Central inflorescence axis 3–6 cm long. Rachis angular, 0.7 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, compressed strongly, 3.4–3.6 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins excurrent. Upper glume margins pubescent. Upper glume apex dentate, 3 -fid.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 3 -veined, pubescent on margins, acute. Fertile lemma elliptic, 1.9–2.2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

**Flower and Fruit.** Anthers 3, 0.6 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.4–1.6 mm long.

**Distribution (TDWG).** Continent. North America, South America.

**Country /Province /State.** Mexico. Southwest Mexico, Southeast Mexico. Mesoamerica, Northern South America, Western South America, Brazil. Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Venezuela. Colombia, Ecuador. Brazil Northeast, Brazil North.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Mary Agnes Merrill Chase (1869–1963) United States agrostologist.

**Classification.** Subfamily Panicoideae. Tribe: Paspalaeae. Subtribe Paspalinae.


**Inflorescence.** Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 5–7 cm long. Racemes 3–5, digitate, ascending, unilateral, 3–9 cm long. Central inflorescence axis 0.4–2 cm long. Rhachis angular, 0.4 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 3.5–4 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acute, 2.2–2.5 mm long, 0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma, gaping. Upper glume 1 length of spikelet, membranous, 3–5 -veined. Upper glume margins tuberculcate, ciliate.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 3–5 -veined, pubescent on margins, ciliate on margins. Fertile lemma 2.2–2.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations flabellate. Culms 25–60 cm long, 1–2 mm diam., 1(–2) -noded. Culm-internodes elliptical in section, thin-walled, distally glabrous or pubescent (in lines). Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths 3–9 cm long, with winged keel, outer margin hairy. Ligule a ciliate membrane, 0.2–0.4 mm long. Collar pubescent. Leaf-blades conduplicate, 6–18 cm long, 3.5–5 mm wide. Leaf-blade surface scabrous, glabrous or pubescent, sparsely hairy, hairy adaxially. Leaf-blade margins ciliate. Leaf-blade apex obtuse.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Racemes 2–4, digitate, spreading, unilateral, 2.5–10 cm long. Central inflorescence axis 0.5–1.8 cm long. Rhachis angular, 0.5–0.8 mm wide, scaberulous on margins, glabrous on margins. Spikelet packing adaxial, 4–5 spikelets per cm, regular, 2 -rowed. Raceme-bases pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, oblong, 3–3.4 mm long, 0.9–1.1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, exceeding apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface puberulous, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, 5 -veined, puberulous, hairy between veins. Fertile lemma elliptic, 2.7–3 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Lodicules 2, fleshy. Anthers 3, 1.2–1.5 mm long, purple.

**Distribution (TDWG).** Continent: South America.

**Country/Province/State.** Northern South America. Venezuela.


**Illustrations (Journals):** *Ruizia* (13:379 Fig 50g-i (1993)).

**Derivation** (Clifford & Bostock 2007): Gk. chrysos, yellow; blepharon, eye-lash. Pedicels invested with golden-yellow hairs.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.
**Habit, Vegetative Morphology.** Annual or perennial, caespitose. Culms erect, 70–100 cm long, 1–2 mm diam. Culm-internodes distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaves cauline. Leaf-sheaths glabrous on surface or hispid, with simple hairs or tubercle-based hairs. Ligule a ciliolate membrane, 0.3–1.2 mm long. Collar glabrous or pubescent. Leaf-blades 5–30 cm long, 5–15 mm wide. Leaf-blade surface hispid, with tubercle-based hairs. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, with 1–2 peduncles per sheath. Racemes 4–10, digitate, unilateral, 4–13 cm long. Central inflorescence axis 1–2 cm long. Rhachis flattened, 1–1.5 mm wide, pilose on surface (on midnerve), ciliate on margins, terminating in a barren extension. Rhachis hairs tawny. Spikelet packing adaxial. Spikelets sunken, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.2–1.6 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume primary vein absent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 2 -veined, without midvein. Fertile lemma oblong, 1.2–1.6 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Anthers 3, 0.5–0.6 mm long. Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** North America, South America.

**Country /Province /State.** Mexico. Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Costa Rica, Guatemala, Panama. Trinidad-Tobago. French Guiana, Guyana, Venezuela. Bolivia, Colombia, Peru. Brazil Southeast, Brazil North, Paraguay.


**Type from Brazil.** Basionym or Replaced Name: *Paspalum chrysostachyum* Schrad., *Schult. Mant.* 2: 176. (1824). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: M.A.P. zu Wied Neuwied s.n., no date, Brazil: Bahia: Comechativa, in campis ad Vals (B; IT: BAA-220 (fragm. ex B), NY, US-2942174 (fragm. ex B & photo)).

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 50–85 cm long. Leaves mostly basal, without demarcation between sheath and blade. Leaf-sheaths glabrous on surface or pilose. Ligule a ciliolate membrane, 0.3–0.5 mm long. Leaf-blades 10–17 cm long, 5–7 mm wide, stiff. Leaf-blade surface glabrous or pubescent.

**Inflorescence.** Inflorescence composed of racemes, with 1–4 peduncles per sheath. Peduncle 10–35 cm long. Racemes 3–14, digitate, unilateral, 5–8 cm long. Central inflorescence axis 0.5–2.5 cm long. Rhachis angular, 0.5–0.9 mm wide, setose on margins. Rhachis hairs yellow, 2–3.5 mm long. Spikelet packing adaxial, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stumm, setose.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, 1.1–1.5 mm long, 0.6–0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, yellow or light brown, without keels, 2 -veined. Upper glume primary vein absent. Upper glume surface glabrous or puberulous, hairy on veins. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, yellow or light brown, 2 -veined, without midvein, glabrous or puberulous, hairy on veins, obtuse. Fertile lemma elliptic, 1.1–1.5 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America, Brazil. Surinam. Brazil Northeast. Bahia. Minas Gerais.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *cilium*, eyelid; -ata, possessing; folium, leaf. Leaf-blades hairy.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes elongated, scaly. Culms erect, slender, 50–65 cm long. Culm-internodes terete. Culm-nodes glabrous. Lateral branches lacking. Leaves without demarcation between sheath and blade. Leaf-sheaths 2–6 cm long, outer margin hairy. Ligule a ciliolate membrane, 0.1–0.3 mm long. Leaf-blades ascending or spreading, 5–25 cm long, 1–2 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 15–30 cm long. Racemes 2–6, digitate, ascending or spreading, flexuous, unilateral, 5–11 cm long. Central inflorescence axis 2–4 cm long. Rhachis angular, 0.2–0.3 mm wide, drab, glabrous on surface, scaberulous on margins, glabrous on margins. Spikelet packing adaxial, 3.5–4.5 spikelets per cm. Raceme-bases brief, glabrous. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 2.1–2.2 mm long, 0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, hyaline, 2 -veined. Upper glume primary vein absent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2 -veined, without midvein. Fertile lemma 2.1–2.2 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica. Belize.


IT: *Sellow* s.n., 1818, Brazil: Ribeirão d'Arca (US-2942141).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (65, Fig. 17).

Derivation (Clifford & Bostock 2007): *L. coma*, comb the hair and by transfer of meaning the hair itself. Sterile lemma with a terminal tuft of hairs.


Habit, Vegetative Morphology. Perennial. Culms erect, slender, 50–70 cm long, 1–3 -noded. Culm-nodes glabrous or pubescent. Leaves mostly basal. Leaf-sheaths 6–12 cm long, outer margin hairy. Ligule a ciliolate membrane, 0.2–0.3 mm long. Leaf-blades involute, 15–35 cm long, 0.5–1 mm wide. Leaf-blade apex acuminate, muticus or pungent, hardened.

Inflorescence. Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 20–50 cm long. Racemes 2–5, digitate, ascending, unilateral, 3–8 cm long. Central inflorescence axis 0.5(–4) cm long. Rhachis angular, 0.2–0.3 mm wide, drab, glabrous on surface, smooth on margins or scabrous on margins, glabrous on margins. Spikelet packing adaxial, 3–4.5 spikelets per cm. Raceme-bases brief, glabrous. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–0.3 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acuminate, 4–4.5 mm long. 0.9–1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5–7 -veined. Upper glume surface glabrous or puberulous, hairy between veins, without hair tufts or with an apical beard.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.2 length of fertile lemma, 1 length of spikelet, 5–7 -veined, glabrous or puberulous, hairy between veins, without hair tufts or with conspicuous apical hairs. Fertile lemma 3.3 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent: South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Southeast. Paraguay.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. coma*, hair of the head; -ata, possessing. With long hairs imparting a silky appearance to the spikelets.


Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Racemes 17, digitate, ascending, unilateral, 10–15 cm long. Rhachis angular, 0.5 mm wide, drab, glabrous on surface,
scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4.5 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.6–1 mm long, ciliate.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, subacute or acute, 3.5–3.7 mm long, 1.2–1.4 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 9 -veined. Upper glume surface pubescent, hairy at apex or between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 9 -veined, pubescent, hairy at apex, hairy also on veins. Fertile lemma 1.5–2 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast.

Minas Gerais, Rio de Janeiro, Espirito Santo, Rio de Janeiro.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Annual. Culms geniculately ascending, 10–75 cm long, 1–2 -noded. Culm-internodes terete. Culm-nodes purple, pubescent. Leaf-sheaths 3–15 cm long, without keel or keeled. Ligule a ciliate membrane, 0.3–0.4 mm long. Leaf-blades 3–20 cm long, 4–10 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 20–45 cm long. Racemes 2–9, paired or digitate, spreading, unilateral, 1.7–2 cm long. Central inflorescence axis 0–3.5 cm long. Rhachis angular, 0.8–1 mm wide, drab, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial, 5 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, obtuse, 1.7–2 mm long, 0.8–1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, dark green or purple, 2–4 -veined. Upper glume surface vein absent. Upper glume surface puberulous.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, dark green or purple, 2–4 -veined, without midvein, puberulous. Fertile lemma 1.7–2 mm long, indurate, light brown or dark brown, shiny, without keel. Lemma margins involute. Lemma apex without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Northeast.

Axonopus compressus (Sw.) Beauv. Agrost. 12 (1812).


Recent Synonyms: Paspalum compressum Raf., Fl. Ludov. 15 (1817).


Illustrations (Journals): Ruizia (13:379 Fig 50j-k (1993)).


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, obtuse, 2–2.5 mm long, falling entire.
**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1.2–1.3 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 4–5 -veined. Upper glume surface glabrous or pubescent, hairy between veins. Upper glume apex acute.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1.2–1.3 length of fertile lemma, 1 length of spikelet, 4–5 -veined, pubescent, hairy between veins, acute. Fertile lemma obovate, 1.5–2 mm long, indurate, pallid, without keel, 4 -veined, more than 3-veined. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** n = 20 (2 refs TROPICOS). 2n = 40 (2 refs TROPICOS), or 60 (2 refs TROPICOS).

**Distribution (TDWG). Continent.** Europe (*), Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America, South America.

**Region.** Northern Europe (*).


**Southwestern Pacific, South-central Pacific, Northwestern Pacific.** Fiji (*), Niue (*), New Caledonia (*), Samoa (*), Tonga (*), Wallis-Futuna Is (*), Cook Is (*), Marquesas, Society Is (*). Caroline Is (*), Marianas (*), Hawaii (*). Southeastern USA, Mexico. Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South Carolina. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Southern South America. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Bahamas, Bermuda, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Galapagos, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.


**Illustrations (Books):** S.A.Renvoize, The Grasses of Bahia, 1984 (193, Fig. 73).


**Habit, Vegetative Morphology.** Perennial. Cataphylls evident. Rhizomes elongated. Culms robust, 70–100 cm long, 1–2 -noded. Culm-nodes pubescent or bearded. Leaves mostly basal, without demarcation between sheath and blade. Leaf-sheaths 6–40 cm long, keeled, pubescent, outer margin hairy. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blades persistent or deciduous at the ligule, 40–80 cm long, 4–6 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex obtuse, asymmetrical.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 10–50 cm long. Racemes 10–20, borne along a central axis, ascending or spreading, unilater, 5–20 cm long. Central inflorescence axis 6–10 cm long. Rachis angular, 0.3 mm wide, with scattered hairs or glabrous on surface, smooth on margins or scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4–5.5 spikelets
per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.3–1 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, obtuse, 2.8–3.3 mm long, 1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5–7 -veined. Upper glume lateral veins prominent. Upper glume surface glabrous or puberulous, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 5–7 -veined, prominently veined, glabrous or puberulous, hairy between veins. Fertile lemma 2.6–2.9 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Northeast, Brazil Southeast.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Josie Cuatrecasas (1903-) who collected in Colombia.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalianae.

**Habit, Vegetative Morphology.** Perennial. Stolons absent or present. Culms erect, slender, 80–120 cm long, 2–3 -noded. Culm-internodes elliptical in section. Culm-nodes pubescent. Leaf-sheaths keeled. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades conduplicate, 15–30 cm long, 2–3 mm wide, stiff. Leaf-blade apex obtuse, hooded.

**Inflorescence.** Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 50 cm long. Racemes 6, digitate, erect or ascending, unilateral, 10–16 cm long. Central inflorescence axis 3 cm long. Rhachis angular, 0.7–0.8 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 7 spikelets per cm. Raceme-bases brief, glabrous. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, 1.7–1.8 mm long, 0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2 -veined. Upper glume primary vein absent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2 -veined, without midvein. Fertile lemma 1.7–1.8 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** *Northern South America*. Venezuela, Bolivia, Colombia.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, slender, 25–30 cm long, 1-noded. Culm-nodes pubescent. Leaves without demarcation between sheath and blade. Leaf-sheaths 2–7 cm long. Leaf-sheath oral hairs scanty. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades spreading, straight or curved, filiform or linear, flat or involute, 3–7 cm long, 0.7–1.4 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, with 1–3 peduncles per sheath. Peduncle 5–15 cm long. Racemes 2, paired, ascending, unilateral, 1.7–4 cm long. Central inflorescence axis 0–0.5 cm long. Rhachis angular, 0.3 mm wide, drab, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial, 4–6 spikelets per cm. Race-me-bases brief, glabrous. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 1.8 mm long, 0.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, purple, 2–4 -veined. Upper glume primary vein absent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 2–4 -veined, without midvein. Fertile lemma 1.6 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Illustrations: None found.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.2–2.9 mm long, falling entire.
Glumes. Glumes one the lower absent or obscure, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 0.9–1 length of spikelet, membranous, without keels. Upper glume primary vein absent or distinct. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet. Fertile lemma elliptic, 2.2–2.9 mm long, indurate, light brown, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.


Country /Province /State. Mexico. Southwest Mexico.


TYPE from Peru. Basionym or Replaced Name: Paspalum elegantulum J. Presl, Rel. Haenk. 1: 211. (1830). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: T. Haenke s.n., no date, Peru (PR; IT: BAA-310 (fragm. ex B), US-2854680 (fragm. ex B, PR & photo)).


Illustrations (Journals): Ruizia (13:384 Fig 51a-b (1993)).


Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Stolons present. Culms 25–75 cm long. Culm-nodes glabrous. Leaves without demarcation between sheath and blade. Leaf-sheaths 2–25 cm long, outer margin hairy. Ligule a ciliolate membrane, 0.3–0.5 mm long. Leaf-blades 5–25 cm long, 3–5 mm wide, stiff. Leaf-blade surface glabrous or pilose. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 30–60 cm long. Racemes 2–12, digitate, ascending or spreading, unilateral, 3–10 cm long. Central inflorescence axis 0–3 cm long. Rhachis angular, 0.4–0.6 mm wide, dark-coloured (green or purple), glabrous on surface, scabrous on margins, ciliate on margins. Rhachis hairs 0.3–1.5 mm long. Spikelet packing adaxial, 5.5–7.5 spikelets per cm. Raceme-bases brief, hirsute. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.2–0.5 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse or subacute, 1.8–2.5 mm long, 0.6–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, mid-green or purple, 2–3 -veined. Upper glume primary vein absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, mid-green or purple, 2–3 -veined, without midvein or with obscure midvein. Fertile lemma 1.8–2.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. Bolivia, Ecuador, Peru. Brazil North.


**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (196, Fig. 74).


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes absent or short. Butt sheaths withering or persistent and investing base of culm, with fibrous dead sheaths. Culms robust, 100–200 cm long, 3–8-noded. Culm-nodes glabrous or pubescent or bearded. Leaves cauline. Leaf-sheaths 15–40 cm long, without keel. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.4–0.5 mm long. Leaf-blade base tapering to the midrib. Leaf-blades conduplicate, 10–100 cm long, 4–15 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous. Leaf-blade apex acuminate, hardened.

**Inflorescence.** Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 40–70 cm long. Racemes numerous, 20–50, borne along a central axis, ascending, unilateral, 9–12 cm long. Central inflorescence axis 10–30 cm long. Rachis angular, 0.3–0.4 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5–9 spikelets per cm. Raceme-bases brief. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, subacute, 1.7–2.1 mm long, 0.5–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume lateral veins ribbed. Upper glume surface glabrous or puberulous, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1–1.1 length of fertile lemma, 1 length of spikelet, 5 -veined, ribbed, glabrous or puberulous, hairy between veins. Fertile lemma linear, 1.7–2 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent South America.


**TYPE** from Trinidad. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: A.S. Hitchcock 9988, 27 Nov 1912, Trinidad and Tobago: Trinidad: Fort George Road, Port of Spain, grassland (US-865560).


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Culms 45 cm long, 2 -noded. Culm-nodes pubescent. Leaf-sheaths 5–40 cm long, keeled, pilose. Ligule a ciliolate membrane, 0.5–0.6 mm long. Leaf-blades 5–20 cm long, 4–10 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface smooth, pilose. Leaf-blade apex obtuse or abruptly acute.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 15–30 cm long. Racemes 4, digitate, ascending, unilateral, 8–15 cm long. Central inflorescence axis 4–5 cm long. Rachis angular, 0.4 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5.5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, compressed slightly, obtuse, 2.3–2.4 mm long, 1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, purple, 5 -veined. Upper glume lateral veins obscure or distinct. Upper glume surface pubescent, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, purple, 5 -veined, obscurely veined or distinctly veined, pubescent, hairy between veins. Fertile lemma 2.1–2.2 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Caribbean, Northern South America, Brazil. Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Brazil North.


**TYPE** from Brazil. **Basionym or Replaced Name:** *Paspalum fastigiatum* Nees ex Trin., *Gram. Panic. 100. (1829). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *l. am Nees ab Esenb.*, Brazil: Minas Gerais (LE-TRIN-0455.01; IT: US-929070 (fragm. ex LE), US-2855332 (fragm. ex M)).


**Derivation** (Clifford & Bostock 2007): *L. fastigio*, sharpen to a point. Panicle branches or culms held erect.


**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or elongated. Butt sheaths thickened and forming a bulb, persistent and investing base of culm, with fibrous dead sheaths. Culms 25–75 cm long. Culm-nodes glabrous. Lateral branches sparse, arising from lower culm. Leaf-sheaths 1–5 cm long. pubescent. Ligule a ciliolate membrane, 0.2 mm long. Leaf-blades flat or conduplicate, 3–8 cm long, 1–2 mm wide. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade margins ciliate. Leaf-blade apex attenuate, filiform.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, with 1 peduncles per sheath. Peduncle 10–20 cm long. Racemes 1–2, single or paired, erect or ascending, straight, unilateral, 3–8 cm long. Central inflorescence axis 0 cm long. Rhachis angular, 0.5–1 mm wide, dark-coloured (grey), glabrous on surface, smooth on margins or scaberulous on margins, glabrous on margins. Spikelet packing adaxial, 4–6 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, compressed 3.2–4.5 mm long, 0.5–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2–4 -veined. Upper glume primary vein absent. Upper glume margins ciliate. Upper glume hairs 0.5–2 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1–1.5 length of fertile lemma, 1 length of spikelet, 2–4 -veined, without midvein. Fertile lemma 3 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex acuminate, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.


Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 1.5–7 cm long. Rachis angular, glabrous on surface or pubescent on surface, glabrous on margins. Spikelet packing adaxial, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, obtuse or subacute, 1.6–2.1 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 2–5 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, obtuse or subacute, 1.6–2.1 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 2–5 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of fertile lemma, 1 length of spikelet, 2–5 -veined, puberulous, acute. Fertile lemma obovate, 1.5–2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse, without ornament (or few obscure hairs). Palea involute, indurate.
Flower and Fruit. 2n = 20 (1 ref TROPICOS).


Region. Northern Europe (*).


Derivation (Clifford & Bostock 2007): L. *flabella*, fan; forma, appearance. The crowded equitant basal leaves resemble a fan.


Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations flabellate. Culms erect, slender, 50–100 cm long. Culm-internodes elliptical in section. Culm-nodes pubescent. Leaf-sheaths 5–30 cm long. Ligule a ciliolate membrane, 0.2–0.3 mm long. Leaf-blades conduplicate, 5–35 cm long, 4–16 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex obtuse or abruptly acute.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 12–15 cm long. Racemes 10–20, digitate, ascending, unilateral, 5–10 cm long. Central inflorescence axis 2.5–4 cm long. Rhachis angular, 0.3–0.4 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 6.5–8 spikelets per cm. Raceme-bases brief, pilose. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 1.3–1.8 mm long, 0.6 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2–5 -veined. Upper glume primary vein absent or distinct.
**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2–5 -veined, without midvein or with obscure midvein. Fertile lemma 1.3–1.8 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse or acute, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, obtuse, 2.7–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1.5 length of fertile lemma, 1 length of spikelet, 5 -veined, glabrous or pubescent, acute. Fertile lemma elliptic, 1.7–2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.


**Axonopus furcatus** (Fluegge) Hitchcock. Rhodora 8: 205 (1906).


Habit, Vegetative Morphology. Perennial. Stolons present. Culms 20–80 cm long, wiry, 1–5 -noded. Culm-internodes terete or elliptical in section. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaves cauleine. Leaf-sheaths 1–25 cm long, without keel or keeled. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blades linear or lanceolate, 3–25 cm long, 2–15 mm wide. Leaf-blade surface glabrous to pilose, densely hairy. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes, terminal or terminal and axillary, with 1–2 peduncles per sheath. Peduncle 10–60 cm long. Racemes 2, paired, spreading, unilateral, 7–10 cm long. Rhachis narrowly winged, flattened, drab, glabrous on surface, scaberulous on margins, glabrous on margins. Spikelet packing adaxial, 1.8–6 spikelets per cm. Raceme-bases brief or linear, 0–5 mm long, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, acumenate, 3.5–5 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5–7 -veined. Upper glume surface glabrous or pubescent, hair on veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume. 1.3–1.6 length of fertile lemma, 1 length of spikelet, 5–7 -veined, glabrous or pubescent, hairy on veins. Fertile lemma 2.7–3.2 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.


Illustrations (Books): S.A. Renvoize, The Grasses of Bahia, 1984 (191, Fig. 72).


Habit, Vegetative Morphology. Annual or perennial, short-lived. Butt sheaths pubescent. Culms robust, 90–120 cm long. Ligule a ciliolate membrane. Leaf-blades flat or conduplicate, 15–32 cm long, 7–15 mm wide. Leaf-blade surface glabrous. Leaf-blade apex obtuse.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, subacute, 2–2.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2 -veined. Upper glume primary vein absent.
Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2 -veined, without midvein. Fertile lemma 2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil Northeast.
Bahia. Bahia.


Illustrations (Books): S.A.Renvoize, Gramineas de Bolivia (1998) (492, Fig. 108).


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 40– 60 cm long, 1–2 -noded. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths 5–30 cm long. Ligule a ciliate membrane, 0.3 mm long. Leaf-blades curved or tortuous, conduplicate, 11–15 cm long, 2–3 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 15–30 cm long, glabrous. Racemes 2–7, digitate, ascending, unilateral, 5–10 cm long. Central inflorescence axis 1–1.5 cm long, pilose. Rhachis angular, 0.3–0.5 mm wide, glabrous on surface, scabrous on margins, ciliate on margins. Rhachis hairs white, 1–3 mm long. Spikelet packing adaxial, 8–9 spikelets per cm. Raceme-bases brief, pilose. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, dorsally compressed, acute, 2.5 mm long, 0.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, mid-green or purple, 5 -veined. Upper glume margins tuberculate, villous. Upper glume hairs 2–3 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, mid-green or purple, 5 -veined, tuberculate on margins, villous on margins, bearing hairs 2–3 mm long. Fertile lemma 2.5 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Bolivia.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. hairy. Plant hairy in respect to all or some parts.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic to ovate, dorsally compressed, 1.5–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 2–4 -veined. Upper glume primary vein absent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of fertile lemma, 1 length of spikelet, membranous, 2–4 -veined, without midvein. Fertile lemma elliptic, 1.5–2 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent: South America.
Country /Province /State: Western South America, Brazil. Bolivia.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. hydor, water; lithos, stone; L. -ica, belonging to. Growing on rocks in a seasonal stream.


**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect, 45–78 cm long, 7–11 -noded. Culm-internodes thin-walled, distally glabrous. Culm-nodes brown, glabrous. Lateral branches lacking. Leaves basal and cauline. Leaf-sheaths wider than blade at the collar, without keel, striately veined, glabrous on surface, outer margin glabrous. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades filiform, terete, 10–20 cm long, 0.5–1 mm wide. Leaf-blade surface grooved along midline, scaberulous, pilose, sparsely hairy.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Peduncle 6–21 cm long. Racemes 1, single, straight or arcuate, unilateral, 6.6–9.2 cm long. Rhachis broadly winged, membranous, folded longitudinally to embrace spikelets, 1.8–2.2 mm wide, glabrous on margins or ciliate on margins, terminating in a barren extension, extension 5 mm long. Spikelet packing adaxial. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 2.3–3.1 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 2.3–3.1 mm long, 1 length of spikelet, hyaline, without keels, 2 -veined. Upper glume primary vein absent. Upper glume surface scabrous. Upper glume apex acute, acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret unlike other scales, lanceolate, 1.5–2 mm long, 0.66 length of spikelet, hyaline, 2 -veined, without midvein, distinctly veined, ciliate on margins, bearing hairs 1.5 mm long, acute, awned. Awn of lower sterile floret
flexuous, 5–7 mm long. Fertile lemma oblong, dorsally compressed, 1.9–2.2 mm long, membranous, much thinner above, dark brown, without keel. Lemma margins flat. Lemma apex acute. Palea gaping, 1.8–2.2 mm long, 1 length of lemma, hyaline, 2 -veined. Palea apex dentate, 2 -fid.

**Flower and Fruit.** Lodicules 2, 0.1 mm long. Anthers 2, 1.3–1.7 mm long, purple. Stigmas 2, terminally exserted. Caryopsis with adherent pericarp, obvoid, 1–1.2 mm long. Embryo 0.4–0.5 length of caryopsis. Hilum punctiform or elliptic.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *folium*, leaf. Leaf-blades rather wide and flat, the plants thereby resembling *Iris* species.


**Habit, Vegetative Morphology.** Perennial. Culms erect or geniculately ascending, 55–100 cm long. Culm-internodes elliptical in section. Culm-nodes pubescent. Leaves basal and cauline. Leaf-sheaths 5–40 cm long, keeled, pilose. Ligule a ciliolate membrane, 1 mm long. Leaf-blades flat or conduplicate, 6–25 cm long, 2–19 mm wide. Leaf-blade surface scabrous. Leaf-blade apex obtuse, soon splitting or simple.

**Inflorescence.** Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 30 cm long. Racemes 6–20, digitate or borne along a central axis, ascending, unilateral, 8–18 cm long. Central inflorescence axis 6–15 cm long. Rhachis angular, 0.3 mm wide, dark-coloured (purple), glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5.5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, obtuse, 2.1–3 mm long, 0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, purple, 5 -veined. Upper glume surface puberulous, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.2–1.4 length of fertile lemma, 1 length of spikelet, purple, 4–5 -veined, without midvein or with obscure midvein, pubescent, hairy between veins. Fertile lemma 1.8–2.1 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: South America. Country /Province /State: Northern South America, Western South America. Venezuela, Bolivia, Colombia, Peru.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–75 cm long, 2–3 mm diam. Culm-internodes distally glabrous. Culm-nodes swollen, pubescent. Lateral branches sparse. Leaves mostly basal, without demarcation between sheath and blade. Leaf-sheaths outer margin hairy. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades flat or conduplicate, 10–25 cm long, 2–3 mm wide. Leaf-blade margins tuberculate-ciliate, hairy at base. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, with 2 peduncles per sheath. Racemes 2–5, digitate, unilateral, 4–11 cm long. Central inflorescence axis 2–2.5 cm long. Rhachis angular, 0.3–0.4 mm wide, scabrous on margins, glabrous on margins. Spikelet packing adaxial. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.9–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 4–5 -veined. Upper glume primary vein absent or distinct. Upper glume surface pubescent, hairy between veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 4–5 -veined, without midvein or with evident midvein, pubescent, hairy between veins. Fertile lemma oblong, 1.8–2.1 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1–1.1 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.
Country /Province /State. Mesoamerica. Panama.


TYPE from Brazil. Basionym or Replaced Name: Axonopus compressus var. jesuiticus Araujo, Bol. Secr. Agr. Ind. Com. 100:36 (1943).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. -icum, belonging to. In honor of the Jesuit Order.


Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms decumbent, 20–40 cm long. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.2–0.3 mm long. Leaf-blades linear, conduplicate, 7–29 cm long, 0.5–6 mm wide. Leaf-blade surface glabrous. Leaf-blade margins glabrous or ciliate, hairy at base. Leaf-blade apex abruptly acute.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 1.9–2 mm long, 0.7–0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1.1–1.2 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 2(–4) -veined. Upper glume primary vein absent. Upper glume lateral veins obscure. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1.1–1.2 length of fertile lemma, 1 length of spikelet, 2(–4) -veined, without
midvein, glabrous, acute. Fertile lemma elliptic, 1.6–1.8 mm long, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Anthers 3, red.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast.

Sao Paulo.


**TYPE** from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: A. Chase 11868, 7 Apr 1930, Brazil: Matto Grosso: W of Santa Rita do Araguya (Goias), ca. 10 km s of Santa Rita, sandy campo, summit leaning, colony (US-150138).

**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Culms 120 cm long, wiry, 2–3 -noded. Leaves basal and cauline. Leaf-sheaths 7–15 cm long, without keel. Ligule a ciliolate membrane, 0.2–0.3 mm long. Leaf-blades involute, 10–50 cm long, 1–2 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex attenuate, filiform.

**Inflorescence.** Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 30–40 cm long. Racemes 2–4, digitate, erect or ascending, flexuous, unilateral, 10–25 cm long. Central inflorescence axis 3–6 cm long. Rachis angular, 0.6–0.7 mm wide, glabrous on surface, smooth on margins or scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4.5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, obtuse, 3.2 mm long, 1.4 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, 4 -veined. Upper glume primary vein absent. Upper glume surface puberulous. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of fertile lemma, 1 length of spikelet, 4 -veined, without midvein, puberulous, acute. Fertile lemma 3.2 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil West Central.

Mato Grosso. Mato Grosso.


**Illustrations (Books):** L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Ilustrada Catarinensis Gramineas* (1981–1982) (1102, Fig. 217).


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 23–43 cm long. Leaves mostly basal. Leaf-sheaths 4 cm long, without keel, glabrous on surface or pilose, outer margin
hairy. Ligule a ciliolate membrane, 0.2 mm long. Leaf-blades erect, conduplicate, 10 cm long, 2.5 mm wide, stiff. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade apex acute.

**Inflorescence.** Inflorescence composed of racemes. Racemes 3–4, digitate, erect, flexuous, unilateral, 3–5 cm long. Central inflorescence axis 1–2 cm long. Rhachis angular, 0.5–0.7 mm wide, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 1–1.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acute, 4 mm long, 1.5 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume surface pilose. Upper glume hairs white.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 5 -veined, pilose, bearing white hairs. Fertile lemma 4 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil South.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Stolons present. Culms erect, 50–100 cm long, 7–8 -noded. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths 2–10 cm long, narrower than blade at the collar, glabrous on surface or pubescent. Ligule a ciliolate membrane, 0.2 mm long. Leaf-blades 15–40 cm long, 1.5–3 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface scabrous, glabrous. Leaf-blade apex attenuate, simple or filiform.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, with 1–2 peduncles per sheath. Peduncle 15–30 cm long. Racemes 3–10, digitate, spreading, flexuous, unilateral, 5–12 cm long. Central inflorescence axis 1.5–3 cm long. Rhachis angular, 0.6–0.7 mm wide, glabrous on surface, smooth on margins or scaberulous on margins, glabrous on margins. Spikelet packing adaxial, 7–11 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acute, 2 mm long, 0.5–0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 3–5 -veined. Upper glume primary vein absent or distinct. Upper glume margins ciliate. Upper glume hairs 0.5–1 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.3 length of fertile lemma, 1 length of spikelet, 3–5 -veined, without midvein or with obscure midvein. Fertile lemma 1.5 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil West Central.

**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online.

**Type** from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: J.G. Kuhlmann 1730, Jan 1919, Brazil: Mato Grosso: Campo dos Urupas (IAN-62429: IT: US-2236060 (fragm. ex IAN & photo)).

**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** in honor of Kuhlmann (fl. 1918) who collected in Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.


**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil West Central.


**Accepted by:** W.D.Clayton & K.Harman, GrassBase (2008) and online.

**Type** from Brazil. T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: J.G. Kuhlmann 1730, Jan 1919, Brazil: Mato Grosso: Campo dos Urupas (IAN-62429: IT: US-2236060 (fragm. ex IAN & photo)).

**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** in honor of Kuhlmann (fl. 1918) who collected in Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Stolons present. Culms erect, 50–100 cm long, 7–8 -noded. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths 2–10 cm long, narrower than blade at the collar, glabrous on surface or pubescent. Ligule a ciliolate membrane, 0.2 mm long. Leaf-blades 15–40 cm long, 1.5–3 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface scabrous, glabrous. Leaf-blade apex attenuate, simple or filiform.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, with 1–2 peduncles per sheath. Peduncle 15–30 cm long. Racemes 3–10, digitate, spreading, flexuous, unilateral, 5–12 cm long. Central inflorescence axis 1.5–3 cm long. Rhachis angular, 0.6–0.7 mm wide, glabrous on surface, smooth on margins or scaberulous on margins, glabrous on margins. Spikelet packing adaxial, 7–11 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acute, 2 mm long, 0.5–0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 3–5 -veined. Upper glume primary vein absent or distinct. Upper glume margins ciliate. Upper glume hairs 0.5–1 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.3 length of fertile lemma, 1 length of spikelet, 3–5 -veined, without midvein or with obscure midvein. Fertile lemma 1.5 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil West Central.

Mato Grosso.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. laxus, loose; flos, flower. Inflorescence an open panicle.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Cataphylls evident. Rhizomes elongated. Culms robust, 70–100 cm long, 1–2 -noded. Culm-nodes pubescent or bearded. Leaves mostly basal, without demarcation between sheath and blade. Leaf-sheaths 6–40 cm long, keeled, pubescent, outer margin hairy. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blades persistent or deciduous at the ligule, 40–80 cm long, 4–6 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex obtuse, asymmetrical.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 10–50 cm long. Racemes 10–20, borne along a central axis, ascending or spreading, unilateral, 5–20 cm long. Central inflorescence axis 6–10 cm long. Rhachis angular, 0.3 mm wide, with scattered hairs or glabrous on surface, smooth on margins or scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4–5.5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.3–1 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, obtuse, 2.8–3.3 mm long, 1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5–7 -veined. Upper glume lateral veins prominent. Upper glume surface glabrous or puberulous, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 5–7 -veined, prominently veined, glabrous or puberulous, hairy between veins. Fertile lemma 2.6–2.9 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Brazil. Colombia. Brazil Southeast. Minas Gerais.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. loose. Inflorescence much branched either as a single panicle or from branching of the culms.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms geniculately ascending, slender, 30–50 cm long, 4 -noded. Culm-internodes elliptical in section. Culm-nodes pubescent. Leaf-sheaths 7.5 cm long, narrower than blade at the collar, hirsute, with tubercle-based hairs, outer margin glabrous. Ligule a
ciliolate membrane, 0.3 mm long. Leaf-blades 10–21 cm long, 5–9 mm wide. Leaf-blade surface hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, with 1–2 peduncles per sheath. Peduncle 7–14 cm long. Racemes 2–3, paired or digitate, spreading, flexuous, unilateral, 5–6 cm long. Rhachis angular, 0.4 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 7 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 1.5–1.7 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, palloid, 1 -veined. Upper glume primary vein absent. Upper glume surface pubescent, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, palloid, 4 -veined, without midvein, pubescent, hairy between veins. Fertile lemma 1.5–1.7 mm long, indurate, palloid, shiny, without keel. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.


Derivation (Clifford & Bostock 2007): Gk. leptos, narrow; stachys, ear of corn. Spikelets long and narrow.


**Habit, Vegetative Morphology.** Perennial. Culms robust, 50–150 cm long, 2–5 -noded. Culm-internodes terete or elliptical in section. Culm-nodes swollen, glabrous or pubescent. Lateral branches lacking. Leaves cauline, without demarcation between sheath and blade. Leaf-sheaths 10–30 cm long, longer than adjacent culm internode, keeled, glabrous on surface. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades conduplicate, 1–50 cm long, 3–5 mm wide, stiff. Leaf-blade apex abruptly acute.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 30–75 cm long. Racemes 5–15, digitate, spreading, unilateral, 5–25 cm long. Central inflorescence axis 3–15 cm long. Rhachis angular, 0.3–0.5 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5.5–11 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 2.3–2.5 mm long, 0.7–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5–7 -veined. Upper glume primary vein absent or obscure. Upper glume surface glabrous.
**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.2–1.4 length of fertile lemma, 1 length of spikelet, 5–7 -veined, without midvein or with evident midvein, glabrous. Fertile lemma 1.6–2 mm long, indurate, light brown, shiny, without keel. Lemma margins involute. Lemma apex without ornament or pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.


Derivation (Clifford & Bostock 2007): L. longus, long; spica, thorn. With long spikelets or inflorescence branches.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms 30–60 cm long, 1–3 -noded. Culm-nodes glabrous. Leaf-sheaths 3–10 cm long, wider than blade at the collar. Ligule a ciliolate membrane, 0.3–0.7 mm long. Leaf-blades spreading, 10–20 cm long, 4–10 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pubescent, sparsely hairy. Leaf-blade apex obtuse or abruptly acute.

**Inflorescence.** Inflorescence composed of racemes, with 1–4 peduncles per sheath. Peduncle 25 cm long. Racemes 2–3, paired or digitate, erect or ascending, unilateral, 5–15 cm long. Central inflorescence axis 0–3 cm long. Rhachis angular, 0.3 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4.5–6 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–0.3 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse or subacute, 3–3.9 mm long, 0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume lateral veins obscure. Upper glume surface pubescent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 2 length of fertile lemma, 1 length of spikelet, 5 -veined, obscurely veined, pubescent. Fertile lemma 1.6–2 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.


Axonopus, Acre, Rondonia. Amazonas.


Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.
TYPE from Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database:

Illustrations: None found.

Derivation (Clifford & Bostock 2007): In honor of Aurim Megallanes Nessi, Venezuelan botanist.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.2–2.5 mm long, 0.8–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 4–5 -veined. Upper glume primary vein absent or obscure. Upper glume lateral veins distinct.

Florets. Basal sterile florets 1, barren without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of fertile lemma, 1 length of spikelet, 4–5 -veined. Fertile lemma elliptic, 2.2–2.5 mm long, indurate, dark brown, shiny, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.4 mm long. Anthers 3, 0.6–0.8 mm long.

Distribution (TDWG). Continent: South America.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Butt sheaths pubescent. Culms erect, 160 cm long, 5 mm diam., 8 -noded. Culm-internodes elliptical in section, yellow. Culm-nodes pubescent. Leaf-sheaths 3–30 cm long, keeled, pubescent. Ligule a ciliate membrane, 0.4–0.5 mm long. Leaf-blades lanceolate, 7–40 cm long, 15–20 mm wide. Leaf-blade surface pilose, densely hairy, hairy on both sides. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, with 1–2 peduncles per sheath. Peduncle 15–45 cm long. Racemes 10–14, borne along a central axis, ascending, unilateral, 8–15 cm long. Central inflorescence axis 5–10 cm long. Rhachis angular, 0.6–0.8 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.3 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, obtuse, 2–2.4 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, purple, 5–7 -veined. Upper glume surface pubescent, hairy between veins.
**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, purple, 5–7 -veined, pubescent, hairy between veins. Fertile lemma 2.1–2.2 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.


**Derivation** (Clifford & Bostock 2007): L. *margo*, border; -ata, possessing. Leaf-blades or lemma with hairs in their margins or the margins otherwise conspicuous.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes absent or short. Stolons present. Butt sheaths withering or persistent and investing base of culm, with fibrous dead sheaths. Culms 30–85 cm long, 1–3 -noded. Culm-nodes pubescent or bearded. Leaves mostly basal. Leaf-sheaths 3–13 cm long, as wide as blade at the collar, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades flat or conduplicate, 4–30 cm long, 2–4 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, without bracts or bracteate at branch bases (lowest raceme), with 1–2 peduncles per sheath. Peduncle 10–25 cm long. Racemes 2–13, digitate, ascending, unilateral, 4–15 cm long. Central inflorescence axis 2–4 cm long. Rhachis angular, 0.5–0.7 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 3–5.5 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.1–0.3 mm long, ciliate.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without Rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic to ovate, dorsally compressed, acute, 2.5–3 mm long, 0.7–0.8 mm wide, with hairs extending 0.5–1 mm beyond apex, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2–4 -veined. Upper glume primary vein absent. Upper glume surface pilose, hairy between veins. Upper glume hairs white or purple, 0.5–1 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2–4 -veined, without midvein, pilose, hairy between veins, bearing white hairs or purple hairs, bearing hairs 0.5–1 mm long. Fertile lemma 2.5–3 mm long, indurate, palidal, without keel. Lemma margins involute. Lemma apex without ornament or pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America, Brazil. Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast. Argentina Northeast, Paraguay.


ST: Andre 4322, Ecuador: in jugo centrali Andinum, alt. 2200 m.

**Illustrations (Journals):** *Ruizia* (13:384 Fig 51c-d (1993)).

**Derivation** (Clifford & Bostock 2007): in honor of Andrew Mathews (- 1841) who collected in Peru.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Culms erect or geniculately ascending, 35–50 cm long, 1–2-noded. Culm-internodes elliptical in section. Culm-nodes glabrous. Leaf-sheaths 6–15 cm long, outer margin hairy. Ligule a ciliolate membrane, 0.4–0.7 mm long. Leaf-blades 7–15 cm long, 5–10 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex obtuse.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 10–30 cm long. Racemes 2–8, digitate, spreading or deflexed, unilateral, 4–10 cm long. Central inflorescence axis 4–5 cm long. Rhachis angular, 0.3–0.4 mm wide, dark-coloured (purple), glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.6–0.9 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acuminate, 2.5–2.6 mm long, 0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 4–5 -veined. Upper glume lateral veins absent or distinct. Upper glume surface glabrous.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.2 length of fertile lemma, 1 length of spikelet, 4 -veined, without midvein, glabrous. Fertile lemma 2.2–2.3 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country/Province/State.** Western South America. Ecuador, Peru.


**TYPE** from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: Mexico: Sinaloa: About 47 miles east of Villa Union (1 mile east of Santa Lucia) on the road from Villa Union to Durango, growing in scattered clumps, not common, alt. 1280 m, 27 Sep 1953, J.R. Reeder & C.G. Reeder 2445 (HT: IAN).

**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. -ana, indicating origin. From Mexico.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.


**Inflorescence.** Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 25 cm long. Racemes 14, digitate, ascending, unilateral, 10–14 cm long. Central inflorescence axis 9 cm long. Rhachis angular, 0.3 mm wide, glabrous on surface, smooth on margins or scaberulous on margins, glabrous on
margins. Spikelet packing adaxial, 5.6 spikelets per cm. Raceme-bases brief, glabrous or pilose. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2–2.1 mm long, 0.7–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, hyaline, pallid, 2–3 -veined. Upper glume primary vein absent or obscure. Upper glume apex obtuse.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet lemma, 1 length of spikelet, 2–3 -veined, without midvein or with obscure midvein, acute. Fertile lemma 2-2.1 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Northwest Mexico.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): vernacular name for the species in Colombia.


**Habit, Vegetative Morphology.** Perennial, caespitose. Stolons present. Culms erect or decumbent, 75–150 cm long, 4–8 mm diam., without nodal roots or rooting from lower nodes. Culm-inernodes distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaves cauline. Leaf-sheaths glabrous on surface or pubescent, outer margin glabrous or hairy. Ligulate ciliolate membrane, 0.5–0.9 mm long. Collar glabrous or pubescent. Leaf-blades 15–38 cm long. 12–18 mm wide. Leaf-blade surface glabrous to pubescent, sparsely hairy, hairy axially. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex obtuse.

**Inflorescence.** Inflorescence composed of racemes, terminal and axillary, with 1–2 peduncles per sheath. Racemes 3–24, digitate or borne along a central axis, ascending, unilateral, 6–16 cm long, simple or with branchlets at base of longer racemes. Central inflorescence axis 4–5 cm long. Rhachis angular, 0.4–0.7 mm wide, with scattered hairs or glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.2–2.8 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 4 -veined. Upper glume primary vein absent. Upper glume margins pubescent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 4 -veined, without midvein, pubescent on margins. Fertile lemma oblong, 2.2–2.8 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp. 
2n = 40 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Mesoamerica, Northern South America, Western South America. Costa Rica, El Salvador, Panama. Venezuela. Colombia, Ecuador.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes elongated. Culms erect, robust, 100–150 cm long, 2–3-noded. Culm-internodes elliptical in section. Culm-nodes glabrous or pubescent. Leaves without demarcation between sheath and blade. Leaf-sheaths 10–40 cm long, outer margin glabrous or hairy. Ligule a ciliate membrane, 0.3–0.4 mm long. Leaf-blades conduplicate, 15–40 cm long, 6–8 mm wide, stiff. Leaf-blade surface smooth. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 20–50 cm long. Racemes 15–20, borne along a central axis, ascending, unilateral, 5–25 cm long, simple or with branchlets at base of longer racemes. Central inflorescence axis 10–15 cm long. Rhachis angular, 0.3–0.4 mm wide, drab or dark-coloured (purple), glabrous on surface, scabrous on margins, glabrous on margins or ciliate on margins. Rhachis hairs 0.3–0.8 mm long. Spikelet packing adaxial, 3.5–6 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.3–0.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, obtuse or subacute, 1.7–2.3 mm long, 0.6–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, purple, 4–5-veined. Upper glume primary vein absent or obscure. Upper glume surface puberulous, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, purple, 4–5 -veined, with obscure midvein, puberulous, hairy between veins. Fertile lemma 1.7–2.3 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast.

Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Minas Gerais, Sao Paulo.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Basal innovations flabellate. Culms slender, 6–20 cm long. Culm-internodes 2–3.8 cm long. Culm-nodes black, glabrous. Lateral branches lacking. Leaf-sheaths 1–4.4 cm long, keeled, glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.1–0.3 mm long. Leaf-blades lanceolate, flat or conduplicate, 1.2–5.8 cm long, 3–6 mm wide. Leaf-blade surface scabrous, pilose. Leaf-blade apex acute.
**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 2.4–11.7 cm long, glabrous. Racemes 3, digitate, ascending, unilateral, 2–3.5 cm long. Central inflorescence axis 0.4–0.9 cm long. Rhachis angular, with scattered hairs, scaberulous on margins. Spikelet packing adaxial, regular, 2 -rowed. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.2–1.4 mm long, 0.5–0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 0–2 -veined. Upper glume primary veins absent. Upper glume lateral veins absent or obscure.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of fertile lemma, 1 length of spikelet, 0–2 –veined, without midvein, without lateral veins or obscurely veined. Fertile lemma elliptic, 1.2–1.4 mm long, indurate, yellow, shiny, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Lodicules 2, 0.3 mm long. Anthers 3, 1–1.2 mm long, purple.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Western South America. Colombia.


**Illustrations:** None found.

**Derivation (Clifford & Bostock 2007):** *L. multus*, many; *pes*, foot.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Stolons present. Culms geniculately ascending or decumbent, 10–15 cm long, 1 -noded. Culm-nodes glabrous. Leaf-sheaths 2–8 cm long. Glabrous on surface. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blades 3–6 cm long, 4–7 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex obtuse, soon splitting.

**Inflorescence.** Inflorescence composed of racemes, with 3–4 peduncles per sheath. Peduncle 6–8 cm long. Racemes 2, paired, erect or ascending, unilateral, 4–6 cm long. Central inflorescence axis 0 cm long. Rhachis angular, 0.6–0.7 mm wide, drab or dark-coloured (purple), glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial, 4–6 spikelets per cm. Raceme-bases brief, pilose. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, obtuse to acute, 2.8–3 mm long, 1–1.4 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, mid-green or purple, 5–7 -veined. Upper glume margins eciliate or pubescent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.4 length of fertile lemma, 1 length of spikelet, mid-green or purple, 5–7 -veined, eciliate on margins or pubescent on margins. Fertile lemma 2–2.1 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Gulf (Mexico). Veracruz.


Habit, Vegetative Morphology. Perennial. Rhizomes absent or short. Stolons present. Culms geniculately ascending, 20–75 cm long, 0–2 -noded. Culm-nodes bearded. Leaf-sheaths 3–20 cm long, keeled, glabrous on surface or pubescent. Ligule a ciliolate membrane, 0.4–0.5 mm long. Leaf-blades 2–30 cm long, 0.5–2.5 mm wide. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 15–50 cm long. Racemes 2, paired, ascending, unilateral, 3–8 cm long. Central inflorescence axis 0.5–3 cm long. Rhachis angular, 0.4–0.6 mm wide, drab, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial, 3–4 spikelets per cm. Raceme-bases brief, glabrous. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.5 mm long, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, acuminate, 3.5–5.1 mm long, 1.3–1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 3–5 -veined. Upper glume primary vein absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.4 length of fertile lemma, 1 length of spikelet, 3–5 -veined, without midvein or with obscure midvein. Fertile lemma elliptic or ovate, 2.5–3.1 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Oiapoque, Amapa, Brazil.


Habit, Vegetative Morphology. Annual. Culms 50 cm long, 1-noded. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths 5–8 cm long, keeled, papillose. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.2–0.3 mm long. Leaf-blades 5–10 cm long, 2–4 mm wide. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes, with 2–7 peduncles per sheath. Peduncle 10–20 cm long. Racemes 2, paired, ascending, unilateral, 1–2.5 cm long. Central inflorescence axis 0 cm long. Rhachis angular, 0.2 mm wide, drab, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial, 3–4 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets sessile.
Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, acuminate, 2.1 mm long, 0.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 4–5 -veined. Upper glume primary vein absent or obscure. Upper glume lateral veins obscure or distinct. Upper glume surface pubescent, hairy between veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 4–5 -veined, without midvein or with obscure midvein, obscurely veined or distinctly veined, pubescent, hairy on veins. Fertile lemma 1.8–1.9 mm long, indurate, grey, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast, Brazil North.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–80(–100) cm long. Ligule a ciliolate membrane, 0.3–0.7 mm long. Leaf-blades flat or conduplicate, 15–30 cm long, 0.5–0.8 mm wide.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.5–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet. Fertile lemma elliptic, 2.5–3 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.


Derivation (Clifford & Bostock 2007): from Campo de Passoura, near Kouran, French Guiana.

Habit, Vegetative Morphology. Perennial. Culms erect, robust, 120 cm long, 2–5 -noded. Culm-internodes elliptical in section. Culm-nodes pubescent. Leaves without demarcation between sheath and blade. Leaf-sheaths 20–40 cm long, keeled, pilose. Ligule a ciliate membrane, 0.7 mm long. Leaf-blades flat or conduplicate, 10–40 cm long, 5–7 mm wide, stiff. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence composed of racemes, with 3 peduncles per sheath. Peduncle 45–50 cm long. Racemes 7–9, digitate, erect or ascending, unilateral, 10–20 cm long. Central inflorescence axis 4–5 cm long. Rhachis angular, 0.5 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 6.5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present, reduced to a stump, ciliate, hairy at base, with 1–3 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, obtuse, 1.8–2 mm long, 0.8–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5–7 -veined. Upper glume primary vein obscure or distinct.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 5–7 -veined, with obscure midvein or with evident midvein. Fertile lemma 1.8–2 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. paucus, few; seta, bristle; -osa, abundance. Rhachis with fewer hairs than related species.


Habit, Vegetative Morphology. Perennial. Culms erect, 80 cm long, 3–4 -noded. Culm-internodes elliptical in section. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths 5–25 cm long. Ligule a ciliate membrane, 0.3 mm long. Leaf-blades flat or conduplicate, 10–20 cm long, 2–3 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex acuminate, filiform.

Inflorescence. Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 25–40 cm long. Racemes 2–4, paired or digitate, ascending, unilateral, 6–13 cm long. Central inflorescence axis 0–2 cm long. Rhachis angular, 0.6–0.7 mm wide, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial, 9–10 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present, reduced to a stump, ciliate, hairy at base, with 1–2 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, compressed slightly, obtuse, 1.6–1.7 mm long, 0.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume 0.8–0.9 length of spikelet, membranous, 2–4 -veined. Upper glume primary vein absent. Upper glume surface pubescent, hairy between veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 0.8–0.9 length of fertile lemma, 1 length of spikelet, 2–4 -veined, without midvein, pubescent, hairy between veins. Fertile lemma 1.6–1.7 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.


**Type** from Brazil. **Basionym or Replaced Name:** Paspalum pellitum Nees ex Trin., Gram. Panic. 89. (1826). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: Sello l.a Sello l. s.n., In Brasilia (LE-TRIN-0507.01; IT; B, BAA-325 (fragm. ex B), US-1258173, US-2942521 (fragm. ex LE), US-2855755), dt absque nom. am. Link.

Illustrations (Books): S.A.Renvoize, The Grasses of Bahia, 1984 (196, Fig. 74).

**Derivation** (Clifford & Bostock 2007): L. covered with skins. The fertile floret(s) is protected by hairy investing glumes or sterile florets.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Butt sheaths persistent and investing base of culm, with curly dead sheaths. Culms robust, 200 cm long, 2–7 -noded. Culm-nodes pubescent. Leaf-sheaths 10–60 cm long, without keel, hirsute. Leaf-sheath oral hairs lacking or ciliate. Ligule a ciliolate membrane, 0.3–1 mm long. Leaf-blades conduplicate, 10–75 cm long, 3–5 mm wide. Leaf-blade surface hirsute, densely hairy.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 30–75 cm long. Racemes numerous, 25–50, borne along a central axis, ascending, unilateral, 9–18 cm long. Central inflorescence axis 7–18 cm long. Rhachis angular, 0.3–0.5 mm wide, drab or dark-coloured (purple), glabrous on surface, scabrous on margins, glabrous on margins. Spikelets packing adaxial, 5–9 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–0.5 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, obtuse, 1.5–2.5 mm long. 0.5–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume surface pubescent, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1–1.2 length of fertile lemma, 1 length of spikelet, 5 -veined, pubescent, hairy between veins. Fertile lemma 1.5–2 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.


**Type** from Colombia. **Recent Synonyms:** Axonopus hoehnei G.A. Black, Advancing Frontiers of Plant Sciences 5: 143, t. 9 (1963).

Illustrations: None found.


**Habit, Vegetative Morphology**. Perennial. Culms erect, 75 cm long. Culm-nodes pubescent. Leaves mostly basal. Leaf-sheaths 5–25 cm long. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blades flat or conuplicate, 10–25 cm long, 5–10 mm wide. Leaf-blade surface scaberulous, rough adaxially, hirsute. Leaf-blade apex acuminate.

**Inflorescence**. Inflorescence composed of racemes, with 2 peduncles per sheath. Peduncle 6 cm long. Racemes 18, digitate, ascending, unilateral, 9–14 cm long. Central inflorescence axis 3.5 cm long. Rhachis angular, 0.4–0.5 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 6.5 spikelets per cm. Raceme-bases brief, pubescent or pilose. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets**. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, acute, 1.6–1.7 mm long, 0.5–0.6 mm wide, falling entire.

**Glumes**. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2 -veined. Upper glume primary vein absent. Upper glume surface pubescent, hairy on veins.

**Florets**. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2 -veined, without midvein, pubescent, hairy on veins. Fertile lemma 1.6–1.7 mm long, indurate, light brown, shiny, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

**Flower and Fruit**. Caryopsis with adherent pericarp.

**Distribution (TDWG)**. Continent: South America. Country /Province /State: Northern South America, Western South America, Brazil. Venezuela. Colombia.


**Accepted by**: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online.


**Illustrations**: None found.

**Derivation** (Clifford & Bostock 2007): *per*, very; *longa*, long. Panicle on a long stalk.


**Habit, Vegetative Morphology**. Perennial. Culms erect, 120 cm long, 3–5 -noded. Culm-nodes pubescent. Leaf-sheaths 25–50 cm long, without keel. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.7 mm long. Leaf-blades involute, 25–50 cm long, 1–1.5 mm wide. Leaf-blade surface pilose, hairy adaxially. Leaf-blade apex attenuate, filiform.

**Inflorescence**. Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 70 cm long. Racemes numerous, 30, borne along a central axis, ascending, unilateral, 20–30 cm long. Central inflorescence axis 15–25 cm long. Rhachis angular, 0.4–0.5 mm wide, drab, glabrous on surface, scaberulous on margins, glabrous on margins. Spikelet packing adaxial, 5 spikelets per cm. Raceme-bases brief. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.4 mm long.

**Fertile Spikelets**. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acuminate, 2.9–3 mm long, 0.8 mm wide, falling entire.

**Glumes**. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5–7 -veined. Upper glume surface puberulous, hairy between veins.

**Florets**. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.4 length of fertile lemma, 1 length of spikelet, 5–7 -veined. Fertile lemma 2.1–2.2 mm

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil West Central, Brazil Southeast.

Mato Grosso. Mato Grosso. Sao Paulo.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.


**Inflorescence.** Inflorescence composed of racemes, with 1–3 peduncles per sheath. Peduncle 40–70 cm long, scaberulous above, glabrous. Racemes 8–24, digitate, unilateral, 7–27 cm long. Central inflorescence axis 7–15 cm long. Rachis angular, scaberulous on margins. Spikelet packing adaxial. Spikelet bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present, oblong or reduced to a stump, 0–2.5 mm long, scaberulous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, 2.2–2.9 mm long, 0.8–1 mm wide, falling entire. Floret callus glabrous or pubescent.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 53 -veined. Upper glume lateral veins prominent. Upper glume surface pubescent. Upper glume margins scaberulous (above).

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1.1 length of fertile lemma, 1 length of spikelet, 5 -veined, pubescent. Fertile lemma elliptic, 1.9–2.4 mm long, 0.7–0.9 mm wide, indurate, yellow, shiny, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Lodicules 2, 0.3 mm long. Anthers 3, 0.7–1 mm long, purple. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America, Western South America. Venezuela. Colombia.


**Illustrations (Books):** W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (81, Fig. 22).

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short, knotty. Culms erect, 25–100 cm long, 2–3 mm diam., 1–3 -noded. Culm-internodes thin-walled. Culm-nodes pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths mostly shorter than adjacent culm internode, keeled, outer margin hairy. Ligule a ciliolate membrane, 0.3–0.5 mm long. Leaf-blades flat or conduplicate, 13–33 cm long, 2–5 mm wide.

**Inflorescence.** Inflorescence composed of racemes. Peduncle 6–25 cm long. Racemes 3–7, digitate, unilateral, 5–11 cm long. Central inflorescence axis 1–4 cm long. Rhachis angular, 0.5 mm wide, with scattered hairs, scabrous on margins, glabrous on margins. Spikelet packing adaxial. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.5–2.8 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure or two, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1–2.5 mm long, 1–5 -veined. Upper glume ovate, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume primary vein absent. Upper glume surface pubescent, hairy at base. Upper glume margins pubescent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 2 -veined, without midvein, pubescent, hairy at base, pubescent on margins. Fertile lemma ovate, 2.2–2.5 mm long, indurate, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Anthers 3, 1.5–1.8 mm long, purple. Caryopsis with adherent pericarp. 2n = 60 (1 ref TROPICOS).

**Distribution (TDWG).** Continent. North America, South America. **Country /Province /State.** Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Western South America. Belize, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba. Colombia.


**TYPE** from Brazil. **Basionym or Replaced Name:** *Paspalum polydactylon* Steud., *Syn. Pl. Gram.* 19 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonomy Database: HT: *P. Salzmann s.n.*, no date, Brazil: Bahia (P; IT: US-2855750 (fragm. ex G, P)).

**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (196, Fig. 74).

**Derivation** (Clifford & Bostock 2007): Gk. *poys*, several; *daktylon*, finger. The panicle has several finger-like branches.
lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, subacute, 1.4–1.9 mm long, 0.5–0.6 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2 -veined. Upper glume primary vein absent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2 -veined, without midvein. Fertile lemma 1.4–1.9 mm long, indurate, dark brown, shiny, without keel.Lemma margins involute. Lemma apex acute, without ornament or pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America, Brazil. Venezuela. Brazil West Central, Brazil Northeast, Brazil Southeast.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): G. polys, many; stachys, ear of corn. Plants with many branched culms or inflorescences.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Rhizomes absent or short. Culms erect or geniculately ascending, 50–120 cm long, 1–5 -noded. Culm-internodes elliptical in section. Culm-nodes glabrous or pubescent. Lateral branches lacking or sparse. Leaves without demarcation between sheath and blade. Leaf-sheaths 15–30 cm long, longer than adjacent culm internode, glabrous on surface. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades ascending, linear or lanceolate, 10–30 cm long, 10–30 mm wide. Leaf-blade apex obtuse.

**Inflorescence.** Inflorescence composed of racemes, terminal or terminal and axillary, with 1–4 peduncles per sheath. Peduncle 25–50 cm long. Racemes 2–20, digitate, ascending or spreading, unilateral, 5–20 cm long. Central inflorescence axis 3–5 cm long; Rhachis angular, 0.3–0.5 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4.8–7 spikelets per cm. Raceme-bases brief. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, acute, 2.2–2.3 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2 -veined. Upper glume primary vein absent. Upper glume surface glabrous or puberulous, hairy on veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 2 –4 -veined, without midvein, glabrous or puberulous, hairy on veins. Fertile lemma 2 mm long, indurate, pallid or mid-green, without keel. Lemma margins involute. Lemma apex obtuse or acute, pubescent (few hairs). Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast, Brazil South.


Illustrations (Books): F.O. Zuloaga et al, Flora del Paraguay 23 (1994) (52, Fig. 12).


Habit, Vegetative Morphology. Perennial. Rhizomes elongated, not obviously scaly or scaly. Culms robust, 80–120 cm long, 2–4-noded. Culm-internodes elliptical in section. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths 10–40 cm long, outer margin hairy. Ligule a ciliolate membrane, 0.4–0.8 mm long. Leaf-blades erect or spreading, conduplicate, 10–30 cm long, 5–12 mm wide, stiff. Leaf-blade surface scabrous, glabrous or hirsute. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 20–50 cm long, smooth or scaberulous above. Racemes 4–30, digitate, ascending or spreading, unilateral, 10–30 cm long. Central inflorescence axis 5–7 cm long. Rhachis angular, 0.5–0.8 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5.5–7 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.2–0.5 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, obtuse or subacute, 2.2–2.7 mm long, 0.8–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2-veined. Upper glume primary vein absent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2-veined, without midvein. Fertile lemma 2.2–2.7 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex without ornament. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. bluish-green. Leaf-blades are covered with short white hairs.


Habit, Vegetative Morphology. Perennial. Butt sheaths villous, with yellow hairs. Basal innovations flabellate. Culms robust, 100–120 cm long, 1–2-noded. Culm-nodes pubescent. Leaf-sheaths 20–30 cm long, keeled, hirsute. Ligule a ciliolate membrane, 0.5–0.6 mm long. Leaf-blades conduplicate, 30–50 cm long, 6–10 mm wide, stiff, glaucous. Leaf-blade surface pubescent. Leaf-blade apex obtuse, soon splitting or asymmetrical.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 30–85 cm long. Racemes 10–35, borne along a central axis, ascending, unilateral, 4–15 cm long. Central inflorescence axis 10–20 cm long. Rhachis angular, 0.2–0.4 mm wide, drab, glabrous on surface, scabrous.
on margins, glabrous on margins. Spikelet packing adaxial, 5.5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.3–0.4 mm long, scabrous.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, compressed slightly or moderately, subacute, 2.3–2.4 mm long, 0.9–1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume lateral veins prominent. Upper glume surface pubescent, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 5 -veined, prominently veined, pubescent, hairy between veins. Fertile lemma 2.3–2.4 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG). Continent.** South America.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. *pubes*, signs of puberty; vagina, sheath; -atum, possessing. Leaf-sheath hairy.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 75–100 cm long, 1–4 -noded. Culm-nodes pubescent. Leaf-sheaths 7–45 cm long, keeled, pubescent. Ligule a ciliolate membrane, 0.3–0.5 mm long. Leaf-blades flat or conduplicate, 10–50 cm long, 10–20 mm wide. Leaf-blade surface smooth or scaberulous, glabrous or pubescent. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 30–90 cm long. Racemes 5–20, digitate, ascending, unilateral, 5–20 cm long. Central inflorescence axis 2–10 cm long. Rhachis angular, 0.3–0.7 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5–6.5 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets sessile or pedicelled. Pedicels absent or present, reduced to a stump, 0.0–0.7 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, subacute, 2.2–3.1 mm long, 0.7–1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume surface pubescent, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1–1.2 length of fertile lemma, 1 length of spikelet, 5 -veined, pubescent, hairy between veins. Fertile lemma 2.2–2.5 mm long, indurate, pullid or yellow, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG). Continents.** South America.

**Country /Province /State.** Northern South America, Western South America, Brazil. French Guiana, Guyana, Surinam, Venezuela. Colombia. Brazil West Central, Brazil Northeast, Brazil North.


Illustrations (Books): W.Burger, Flora Costaricensis 15, Gramineae: Fieldiana Botany New Series 4 (1980) (81, Fig. 22), F.O.Zuloaga et al, Flora del Paraguay 23 (1994) (54, Fig. 13).


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms 50–80 cm long, 0.5–1 mm diam. Culm-nodes flush with internodes, purple, glabrous or pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths mostly shorter than adjacent culm internode, keeled, glabrous on surface or pilose, outer margin hairy. Ligule a ciliolate membrane, 0.3–0.5 mm long. Collar pilose. Leaf-blades 15–25 cm long, 2–4 mm wide. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Peduncle 12–17 cm long. Racemes 3–6, digitate, unilateral, 4–8 cm long. Central inflorescence axis 1–3 cm long. Rhachis angular, 0.4–0.5 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present, reduced to a stump, pubescent.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, 1.8–2.2 mm long, with hairs extending 0.1–0.3 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume primary vein absent. Upper glume margins pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 2 -veined, without midvein, pubescent on margins. Fertile lemma ovate, 1.7–2.1 mm long, indurate, without keel. Lemma margins involute. Lemma apex scabrous. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2 mm long, purple. Caryopsis with adherent pericarp.

2n = 20 (1 ref TROPICOS).


Country /Province /State. Mexico. Central Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica, Northern South America, Western South America, Brazil, Southern South America. Costa Rica, Guatemala, Honduras, Nicaragua, Panama. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Paraguay.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): in honor of Rambo who collected in Brazil.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.


**Inflorescence.** Inflorescence composed of racemes, with 2 peduncles per sheath. Peduncle 25–50 cm long. Racemes 12–17, digitate, ascending, unilateral, 7–12 cm long. Central inflorescence axis 2–5.5 cm long. Rhachis angular, 0.5 mm wide, dark-coloured (purple), glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile or pedicellated. Pedicels present, reduced to a stump, 0–0.3 mm long, bearing a few hairs, hairy at base.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, acute, 2.7–2.9 mm long, 0.8–0.9 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, purple, 2 -veined. Upper glume primary vein absent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.2 length of fertile lemma, 1 length of spikelet, purple, 2 -veined, without midvein, obscurely veined. Fertile lemma 2.3–2.4 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil Southeast, Brazil South. Sao Paulo. Rio Grande do Sul.


**Derivation** (Clifford & Bostock 2007): *L. ramos*, branch; -osa, abundance. Inflorescences or culms much branched.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect or geniculately ascending, slender, 15–80 cm long. Culm-internodes elliptical in section. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths 2–4 cm long, longer than adjacent culm internode, narrower than blade at the collar, outer margin hairy. Ligule a ciliolate membrane, 0.2 mm long. Leaf-blades 3–5 cm long, 0.5–1 mm wide. Leaf-blade surface glabrous.

**Inflorescence.** Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 20–40 cm long. Racemes 2–3, paired or digitate, spreading, unilateral, 3–7 cm long. Central inflorescence axis 0.5–1.5 cm long. Rhachis angular, 0.3 mm wide, glabrous on surface, smooth on margins, glabrous on margins.
Spikelet packing adaxial, 7.5 spikelets per cm. Raceme-bases brief, glabrous. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, obtuse, 1.3–1.4 mm long, 0.5 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, dark brown, 2–4 -veined. Upper glume primary vein absent. Upper glume surface pubescent, hairy on veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, dark brown, 2–4 -veined, without midvein, pubescent, hairy on veins. Fertile lemma 1.3–1.4 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America. French Guiana, Surinam, Venezuela.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose, clumped densely. Culms erect, 60–70 cm long, 1 -noded. Culm-nodes pubescent. Leaves mostly basal. Leaf-sheaths 3–15 cm long, as wide as blade at the collar. Ligule a ciliate membrane, 0.3 mm long. Leaf-blades flat or conduplicate, 10–20 cm long, 1.5–2 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acute.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 30–50 cm long. Racemes 2–3, paired or digitate, spreading, flexuous, unilateral, 5–9 cm long. Central inflorescence axis 0–1 cm long. Rhachis angular, 0.3 mm wide, dark-coloured (purple), glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 3.5 spikelets per cm. Raceme-bases brief, pilose. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acuminate, 4 mm long, 1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume surface glabrous or pubescent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 5–7 -veined, glabrous or puberulous. Fertile lemma 3.4 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. North America.

**Country /Province /State.** Mexico. Southwest Mexico.

Nayarit.


**Derivation** (Clifford & Bostock 2007): in honor of Bernado Rosengurtt (1916-) who collected in South America.

**Classification.** Subfamily Panicioideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Stolons present. Culms decumbent, 20–40 cm long, 1–3 -noded. Culm-internodes elliptical in section. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths 2–15 cm long, wider than blade at the collar, glabrous on surface. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles absent or erect. Ligule a ciliate membrane, 0.8 mm long. Leaf-blades 8–12 cm long, 5–10 mm wide. Leaf-blade apex acute, hooded or simple.

**Inflorescence.** Inflorescence composed of racemes, with 2–4 peduncles per sheath. Peduncle 4–10 cm long. Racemes 2, paired, erect, unilateral, 4–9 cm long. Central inflorescence axis 0 cm long. Rachis angular, 0.8 mm wide, drab, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial, 4.5–4.8 spikelets per cm. Raceme-bases brief. Spikelets appressed, solitary. Fertile spikelets sessile or pedicelled. Pedicels absent or present, reduced to a stump, 0–0.2 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, compressed slightly, acuminate, 2.7–3.2 mm long, 1–1.2 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 4–5 -veined. Upper glume primary vein absent or obscure. Upper glume surface glabrous or puberulous, hairy at base.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 4–5 -veined, without midvein or with obscure midvein, obscurely veined, glabrous or puberulous, hairy at base. Fertile lemma elliptic or ovate, 2.5–2.7 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): *L. rupestris*, rock -estre, place of growth; Growing amongst rocks.

**Classification.** Subfamily Panicioideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Basal innovations flabellate. Culms geniculately ascending, 10–35 cm long, 1–2 mm diam., 1–2 -noded. Culm-internodes thin-walled, distally glabrous. Leaves without demarcation between sheath and blade. Leaf-sheaths 7.5 cm long, with winged keel, glabrous on surface. Ligule a ciliate membrane, 0.5–0.6 mm long. Leaf-blades erect, conduplicate, 5–
10 cm long, 2–4 mm wide. Leaf-blade surface glabrous or hirsute, sparsely hairy, hairy abaxially, with tubercle-based hairs. Leaf-blade apex acute.

**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Racemes 2(–3), paired, spreading, unilateral, 4.5–6.5 cm long. Central inflorescence axis 0(–1) cm long. Rhachis angular, 0.6 mm wide, glabrous on margins. Spikelet packing adaxial, 6 spikelets per cm, regular, 2 -rowed. Raceme-bases pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, obtuse, 2.9–3.5 mm long, 0.8–1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, exceeding apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose, hairy between veins. Upper glume hairs 0.5–1 mm long.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 2.7–3.2 mm long, 0.9 length of spikelet, 4 -veined, without midvein, pilose, hairy between veins. Fertile lemma elliptic, 2.4–3.5 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

**Flower and Fruit.** Lodicules 2, fleshy. Anthers 3, 1–1.2 mm long, yellow.

**Distribution (TDWG).** Continent. South America. Country /Province /State. Brazil. Brazil West Central, Brazil North.

Goiás. Tocantins.


HT: Humboldt & Bonpland s.n., Venezuela (P; IT: US-80014 (fragm. ex B-W, P)).


Derivation (Clifford & Bostock 2007): L. *scopae*, broom; -aria, pertaining to. Inflorescences condensed resembling a broom.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.7–2.9 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, purple, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins.
Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 3 -veined, with evident midvein, pubescent, hairy between veins. Fertile lemma oblong, 2.2–2.4 mm long, indurate, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse, scabrous. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5–1.7 mm long, purple. Caryopsis with adherent pericarp.  
$2n = 20$ (1 ref TROPICOS).  


Illustrations: None found.  
Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle glabrous. Racemes digitate, ascending, unilateral, 5–13 cm long. Central inflorescence axis 0.5–2 cm long. Rhachis angular, 0.5–0.7 mm wide, villous on surface, scabrous on margins, setose on margins. Rhachis hairs white, 2–3 mm long. Spikelet packing adaxial, 7–10 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.1–0.2 mm long, bearing a few hairs, hairy at tip.  
Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachillla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse to acute, 1.6–1.7 mm long, 0.6 mm wide, falling entire.  
Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2 -veined. Upper glume primary vein absent. Upper glume lateral veins prominent. Upper glume surface pilose, hairy on veins, without hair tufts or with an apical beard.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2 -veined, without midvein, prominently veined, pilose, hairy on veins, without hair tufts or with conspicuous apical hairs. Fertile lemma 1.6–1.7 mm long, indurate, yellow, dull, without keel. Lemma surface with conspicuous apical hairs. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.  
Distribution (TDWG). Continent. South America.  
Country /Province /State. Northern South America, Western South America, Brazil. French Guiana. Colombia. Brazil North.  
Amapa.


T:<Type of Basionym> fide TROPICOS and Kew Synonomy Database: T: Brazil: Minas Gerais (LE-TRIN-0533.01 (fragm. ex hb. reg. Monac. & illustr. no. 582, 1836)). Herb. reg. Monac. ill. no 582 1836. HT: K.F.P. von Martius s.n., no date, Brazil: Minas Gerais: Adamantiem Dist. (M; IT: LE, US-80020 (fragm.)).


Habit, Vegetative Morphology. Perennial, caespitose. Culms slender, 50–90 cm long, 1–4 -noded. Culm-internodes terete. Leaf-sheaths without keel. Ligule a ciliate membrane, 0.2–0.3 mm long. Leaf-blades erect, curved, conduplicate or involute, 5–40 cm long, 2–7 mm wide, stiff. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 25–50 cm long. Racemes 4–30, borne along a central axis, ascending or spreading, unilaterial, 5–15 cm long. Central inflorescence axis 3–15 cm long. Rhachis angular, 0.3–0.4 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 6–10 spikelets per cm. Raceme-bases brief, glabrous or pubescent. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pecicles present, 0.2–0.4 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper sterile. Spikelets oblong or ovate, dorsally compressed, obtuse or subacute, 1.6–2.1 mm long, 0.6–0.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume lateral veins ribbed. Upper glume surface glabrous or puberulous, hairy between veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 5 -veined, ribbed, glabrous or puberulous, hairy between veins. Fertile lemma 1.6–2.1 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

\[ n = 10 \] (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia. Brazil West Central, Brazil Southeast, Brazil South. Argentina Northwest, Argentina Northeast, Paraguay, Uruguay.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *singulus*, solitary; -are, pertaining to. Inflorescence consisting of a single raceme.


Habit, Vegetative Morphology. Annual. Culms erect, 10–75 cm long. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades conduplicate, 5–15 cm long, 3–8 mm wide.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate (turbinate), turbinate, dorsally compressed, 3.5–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, exceeding apex of florets, thinner than fertile lemma. Upper glume ovate, spurred, 3.5–4 mm long, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins, with a transverse fringe of hair (0.7–1mm). Upper glume hairs red. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, pubescent, with a transverse fringe of hair, bearing red hairs, bearing hairs 0.5 mm long, obtuse. Fertile lemma obovate, 2.2–2.5 mm long, indurate. Lemma margins involute. Lemma apex obtuse, pubescent. Palea indurate.

Distribution (TDWG). Continent. South America.


Habit, Vegetative Morphology. Perennial, caespitose. Culms 40–60 cm long, 1 -noded. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths 6–10 cm long, wider than blade at the collar, keeled. Leaf-sheath auricles erect. Ligule a ciliolate membrane, 0.4–0.5 mm long. Leaf-blades 15–25 cm long, 5–7 mm wide. Leaf-blade apex obtuse, soon splitting or simple.

Inflorescence. Inflorescence composed of racemes, with 2–3 peduncles per sheath. Peduncle 20–30 cm long. Racemes 3–4, digitate, ascending, unilateral, 6–9 cm long. Central inflorescence axis 2–4 cm long. Rhachis angular, 0.3 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 3.5–4.5 spikelets per cm. Raceme-bases brief, pilose. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 1 mm long, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acute, 2.8–3 mm long, 0.7–0.8 mm wide, falling entire.
Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, dark brown, 5 -veined. Upper glume surface glabrous or puberulous, hairy between veins, without hair tufts or with an apical beard.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, dark brown, 5 -veined, with unevenly spaced veins (near margin), glabrous or puberulous, hairy between veins, without hair tufts or with conspicuous apical hairs. Fertile lemma elliptic, 2.5 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Illustrations (Books): F.O.Zuloaga et al, Flora del Paraguay 23 (1994) (61, Fig. 15).

Derivation (Clifford & Bostock 2007): L. succus, juice; -ulentus, well developed. Foliage a useful fodder.


Habit, Vegetative Morphology. Perennial. Culms 60–120 cm long, 3–4 -noded. Culm-nodes glabrous. Leaf-sheaths 8–30 cm long. Leaf-sheath auricles absent or erect. Ligule a ciliolate membrane. Leaf-blades 10–50 cm long, 10–20 mm wide, light green or glaucous. Leaf-blade surface smooth, glabrous. Leaf-blade apex obtuse, soon splitting or simple.

Inflorescence. Inflorescence composed of racemes, with 2–3 peduncles per sheath. Peduncle 30–45 cm long. Racemes 15–25, digitate, ascending, unilateral, 8–18 cm long. Central inflorescence axis 5–8 cm long. Rhachis angular, 0.4 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5–5.5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels present, reduced to a stump, bearing a few hairs, hairy at base.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, obtuse or subacute, 2.4–2.5 mm long, 0.7–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, purple, 2 -veined. Upper glume primary vein absent. Upper glume surface pubescent, hairy on veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2 -veined, without midvein, pubescent, hairy on veins. Fertile lemma 2.4–2.5 mm long, indurate, light brown or dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Paraguay.


**Derivation** (Clifford & Bostock 2007): L. *forma*, appearance. Similar in appearance to *Axonopus suffultus*.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Basal innovations flabellate. Culms erect, 100 cm long, 1–2 -noded. Culm-nodes glabrous. Leaf-sheaths 8–9 cm long, keeled. Ligule an eciliate membrane, 0.2 mm long. Leaf-blades persistent or deciduous at the ligule, conduplicate, 20–40 cm long, 10–12 mm wide, stiff, light green. Leaf-blade surface glabrous. Leaf-blade apex obtuse, soon splitting or simple.

**Inflorescence.** Inflorescence composed of racemes, with 2 peduncles per sheath. Peduncle 25–30 cm long. Racemes 9, digitate, ascending, unilateral, 5–12 cm long. Central inflorescence axis 1–3.5 cm long. Rhachis angular, 0.3 mm wide, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 10 spikelets per cm. Raceme-bases brief, pubescent or pilose. Spikelets appressed, solitary. Fertile spikelets sessile or pedicelled. Pedicels present, reduced to a stump, 0–0.4 mm long, ciliate, hairy at base, with 0.5–0.8 mm long hairs.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, obtuse, 2 mm long. 0.7–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, light green, 5 -veined. Upper glume surface glabrous or puberulous, hairy at base.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, light green, 5 -veined, glabrous or puberulous, hairy at base. Fertile lemma 2 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex acute, without ornament or pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.


**TYPE** from Brazil. **Basionym or Replaced Name:** *Paspalum suffultum* Mikan ex Trin., *Spreng. Neue Entdeck. 2:* 46 (1821). T:<Type of Basionym>: fide TROPICOS and Kew Synonomy Database: HT: *J.S. Mikan*, In Brasilia (LE-TRIN-0537.07 (& illustr.); IT: US-80029 (fragm. ex LE)).


**Derivation** (Clifford & Bostock 2007): L. *suffulcio*, support from beneath. Rhizome raised off the soil by prop roots.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.


**Inflorescence.** Inflorescence composed of racemes, with 1–2 peduncles per sheath. Racemes 10–25, digitate, ascending, unilateral, 3–10 cm long. Rhachis angular, 0.6 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5.5 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.2–0.3 mm long, ciliate, hairy at base, with 1–1.5 mm long hairs.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 2.3 mm long, 0.7–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, hyaline, 2 -veined. Upper glume primary vein absent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, hyaline, 2 -veined, without midvein. Fertile lemma 2.3 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

\[ n = 10 \] (1 ref TROPICOS).

**Distribution (TDWG).** Continent. South America.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Culms erect, 80–100 cm long, 2–3 -noded. Culm-nodes bearded. Leaves basal and cauline. Leaf-sheaths 8–12 cm long, narrower than blade at the collar, keeled. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blade base cuneate or truncate. Leaf-blades 8–22 cm long, 7–10 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

**Inflorescence.** Inflorescence composed of racemes, with 2 peduncles per sheath. Peduncle 25 cm long. Racemes 10, digitate, ascending, flexuous, unilaterial, 8–15 cm long. Central inflorescence axis 3 cm long. Rhachis angular, 0.5–0.6 mm wide, glabrous on surface, smooth on margins or scaberulous on margins, glabrous on margins. Spikelet packing adaxial, 5 spikelets per cm. Raceme-bases brief, pilose. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.4 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, obtuse, 2 mm long, 0.7 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume lateral veins ribbed. Upper glume surface pubescent, hairy between veins. Upper glume hairs purple.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 5 -veined, ribbed, pubescent, hairy between veins, bearing purple hairs. Fertile lemma linear, 1.7–1.8 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil. Brazil North. Para, Amapa. Amapa.
Axonopus surinamensis (Steud.) Henrard. Blumea 5: 275 (1942).


Illustrations: None found.


Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations subterete or flabellate. Culms robust, 100–200 cm long, 3–5 mm diam., 1–3 -noded. Culm-internodes elliptical in section. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaves basal and cauline. Leaf-sheaths 15–50 cm long, keeled, hisutre. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blades 10–40 cm long, 2–15 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes, terminal or terminal and axillary, with 1–3 peduncles per sheath. Peduncle 35–100 cm long. Racemes 8–10, digitate, ascending or drooping, unilateral, 12–20 cm long. Central inflorescence axis 2–10 cm long. Rhachis angular, 0.4–0.5 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 5–6.5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, subacute, 3–3.2 mm long. 0.7–0.8 mm wide, falling entire.

Glumes. Glumes one the lower obscure or absent, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume lateral veins prominent. Upper glume surface glabrous or puberulous, hairy between veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.3–1.4 length of fertile lemma, 1 length of spikelet, 5 -veined, glabrous or puberulous, hairy between veins. Fertile lemma 2.1–2.7 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. French Guiana, Guyana, Surinam, Venezuela. Brazil West Central, Brazil Northeast, Brazil North.


Illustrations: None found.


Habit, Vegetative Morphology. Perennial. Culms erect, robust, 120 cm long, 5–10 -noded. Culm-nodes pubescent. Leaves without demarcation between sheath and blade. Leaf-sheaths 20–30 cm long, keeled, hisutre. Ligule a ciliolate membrane, 0.7–0.8 mm long. Leaf-blades flat or conduplicate, 30 cm long, 5–12 mm wide. Leaf-blade surface hisutre, densely hairy. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 40 cm long. Racemes 14, borne along a central axis, ascending, unilateral, 8–12 cm long. Central inflorescence axis 7 cm long. Rhachis angular, 0.5–0.6 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 6.5–7.5 spikelets per cm. Raceme-bases brief, pilose. Spikelets appressed, solitary. Fertile spikelets sessile or pedicelled. Pedicels absent or present, 0–0.2 mm long.
**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, acute, 2.5 mm long, 0.7–0.8 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5 -veined. Upper glume surface pubescent, hairy between veins.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.1 length of fertile lemma, 1 length of spikelet, 5 -veined, pubescent, hairy between veins. Fertile lemma linear, 2.2 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex acute, without ornament. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Brazil. Brazil North. Para, Amapa. Pará.


**Illustrations (Books):** S.A.Renvoize, *The Grasses of Bahia*, 1984 (191, Fig. 72).

**Derivation** (Clifford & Bostock 2007): L. thin. Culms, leaf-blades or pedicels, slender.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms slender, 30–50 cm long. Ligule a ciliolate membrane. Leaf-blades filiform, 4–10 cm long, 1 mm wide. Leaf-blade apex acute or acuminate.

**Inflorescence.** Inflorescence composed of racemes. Racemes 2–4, paired or digitate, ascending, unilaterial, 2.5–5 cm long. Central inflorescence axis 0 cm long. Rhachis angular, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, ciliate.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, obtuse, 1.2 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 2 -veined. Upper glume primary vein absent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 2 -veined, without midvein. Fertile lemma 1.2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.
**Country /Province /State.** Brazil. Brazil Northeast. Bahia.


**Derivation** (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to *Triglochin*.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Stolons present. Culms 25–65 cm long, 1–2 -noded. Culm-internodes terete. Culm-nodes glabrous or pubescent. Leaves mostly basal, without demarcation between sheath and blade. Leaf-sheaths 8–20 cm long, without keel. Leaf-sheath oral hairs pubescent. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blades 10–30 cm long, 1–2 mm wide. Leaf-blade apex filiform.

**Inflorescence.** Inflorescence composed of racemes, with 1 peduncles per sheath. Peduncle 10–17 cm long. Racemes 2–3, paired or digitate, ascending, unilateral, 5–10 cm long. Central inflorescence axis 0 cm long. Rhachis angular, 0.3–0.4 mm wide, drab, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing adaxial, 2.5 spikelets per cm. Raceme-bases linear, 10–15 mm long, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acuminate, 3.6–4 mm long, 1 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 3–5 -veined. Upper glume surface puberulous, hairy between veins, without hair tufts or with an apical beard.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume. 1.2 length of fertile lemma, 1 length of spikelet, 3–5 -veined, puberulous, hairy between veins, without hair tufts or with conspicuous apical hairs. Fertile lemma 3 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex acuminate, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent: South America. Country /Province /State: Northern South America, Western South America, Brazil, Venezuela. Colombia. Brazil West Central. Amazonas, Acre, Rondonia, Amazonas.


**Illustrations (Books):** F.O. Zuloaga et al, *Flora del Paraguay* 23 (1994) (65, Fig. 17).

**Derivation** (Clifford & Bostock 2007): L. unus, one; nodus, knot. Flowering culms with a single node.


**Habit, Vegetative Morphology.** Perennial, caespitose. Rhizomes short. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect, 50–80 cm long, 1–3 -noded. Culm-internodes elliptical in section, 20–35 cm long, yellow or purple, smooth, distally glabrous. Culm-nodes pubescent or bearded. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths 6–14 cm long, glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.3 mm long. Collar glabrous. Leaf-blades filiform, involute, 17–60 cm long, 0.5–1 mm wide, stiff. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acuminate, pungent, hardened, hairy.

**Inflorescence.** Inflorescence composed of racemes. Peduncle 20–50 cm long, glabrous. Racemes 2–4(–7), digitate or borne along a central axis, erect or ascending, flexuose, unilateral, 4–8.5 cm long. Central inflorescence axis 2–6 cm long. Rhachis angular, 0.3–0.6 mm wide, drab, glabrous on surface, glabrous on margins. Spikelet packing adaxial, 2 -rowed. Raceme-bases glabrous. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.2–0.6 mm long.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the
lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 4.2–4.5 mm long, 0.9 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 4–4.6 mm long, 1 length of spikelet, membranous, 5 -veined. Upper glume lateral veins obscure. Upper glume margins villous. Upper glume hairs 1–2.4 mm long.

**Florrets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 4.2–4.8 mm long, 1.3–1.4 length of fertile lemma, 1 length of spikelet, 5 -veined, obscurely veined, villous on margins, bearing hairs 1–2.4 mm long. Fertile lemma elliptic, 3–3.8 mm long, 0.8 mm wide, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Lodicules 2, cuneate, 0.2 mm long. Anthers 3, 2.7 mm long, purple. Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Brazil, Southern South America. Brazil Southeast. Paraguay. Sao Paulo.

**Axonopus villosus** Swallen. *Fieldiana, Bot.*, 28 No. 1, 21 (1951).


**Illustrations:** None found.

**Derivation** (Clifford & Bostock 2007): L. villi, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.

**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial. Basal innovations flabellate. Culms robust, 70–200 cm long. Culm-nodes bearded. Leaves without demarcation between sheath and blade. Leaf-sheaths hirsute. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades conduplicate, 10–17 cm long, 6–10 mm wide, stiff. Leaf-blade surface hirsute.

**Inflorescence.** Inflorescence composed of racemes, with 2 peduncles per sheath. Racemes 4–6, digitate, ascending or spreading, unilateral, 7–16 cm long. Central inflorescence axis 2–5 cm long. Rhachis angular, 0.4 mm wide, glabrous on surface, scabrous on margins, ciliate on margins. Rhachis hairs 1–2 mm long. Spikelet packing adaxial, 4.5 spikelets per cm. Raceme-bases brief, pubescent. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, subacute, 3.5–4 mm long, 1–2.2 mm wide, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 5–7 -veined. Upper glume surface glabrous or puberulous, hairy between veins.

**Florrets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1.2 length of fertile lemma, 1 length of spikelet, 5–7 -veined, glabrous or puberulous, hairy between veins. Fertile lemma 3 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

**Flower and Fruit.** Caryopsis with adherent pericarp.

**Distribution (TDWG).** Continent. South America.

**Country /Province /State.** Northern South America. Venezuela.


**Illustrations (Books):** W. Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (85, Fig. 24).


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Culms erect, 30–80 cm long, 1–3 mm diam. Culm-internodes elliptical in section, thick-walled or solid. Lateral branches ample. Leaf-sheaths longer than adjacent culm internode, keeled, outer margin hairy. Ligule a ciliolate membrane, 0.7–0.9 mm long. Collar pilose. Leaf-blades 9–20 cm long, 4–7 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex obtuse, hooded.

**Inflorescence.** Inflorescence composed of racemes. Peduncle 6–15 cm long. Racemes 3–8, digitate, unilateral, 6–13 cm long. Central inflorescence axis 1–3 cm long. Rhachis angular, 0.5 mm wide, with scattered hairs, scabrous on margins, glabrous on margins. Spikelet packing adaxial. Raceme-bases brief, pilose. Spikelets appressed, solitary. Fertile spikelets sessile.

**Fertile Spikelets.** Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3–3.5 mm long, falling entire.

**Glumes.** Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 4–5 -veined. Upper glume primary vein absent or obscure. Upper glume surface pubescent, hairy at base. Upper glume margins pubescent.

**Florets.** Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, 4–5 -veined, without midvein or with obscure midvein, pubescent, hairy at base, pubescent on margins. Fertile lemma elliptic, 2.5–3.1 mm long, indurate, without keel. Lemma surface striate. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

**Flower and Fruit.** Anthers 3, 2.2 mm long, purple. Caryopsis with adherent pericarp.


**Illustrations:** None found.


**Classification.** Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

**Habit, Vegetative Morphology.** Perennial, caespitose. Cataphylls evident. Basal innovations flabellate. Culms erect, robust, 75–100 cm long, 1–2 -noded. Culm-nodes glabrous. Lateral branches sparse. Leaves mostly basal. Leaf-sheaths 6–35 cm long. keeled. Ligule a ciliolate membrane, 0.3–0.4 mm long. Leaf-blades deciduous at the ligule, conduplicate, 5–30 cm long, 4–7 mm wide, stiff, light green. Leaf-blade surface glabrous. Leaf-blade apex obtuse.
Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 30–45 cm long. Racemes 5–8, digitate, ascending or spreading, unilateral, 10–20 cm long. Rhachis angular, 0.5 mm wide, drab, glabrous on surface, scabrous on margins, glabrous on margins. Spikelet packing adaxial, 4 spikelets per cm. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.3–0.5 mm long, ciliate, hairy at base, with 1–3 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, obtuse, 2.5–2.8 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 1 length of spikelet, membranous, 7 -veined. Upper glume lateral veins prominent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, 1 length of fertile lemma, 1 length of spikelet, 5–7 -veined. Fertile lemma 2.5–2.8 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2–1.3 mm long, purple. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.


Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Fernando Zuloaga (194x-), Argentinean agrostologist.


Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Butt sheaths pubescent. Basal innovations flabellate. Culms 9–32 cm long. Culm-internodes 2–5 cm long. Culm-nodes pubescent. Leaf-sheaths 1.5–7 cm long, striately veined, glabrous on surface. Ligule a ciliate membrane, 0.1–0.3 mm long. Leaf-blades flat or conduplicate, 0.8–13 cm long, 1.5–2.4 mm wide. Leaf-blade surface scabrous, glabrous, hairless throughout or except near base. Leaf-blade apex obtuse, hooded.


Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, acute, 2.6–3.8 mm long, 0.9–1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 53 -veined. Upper glume lateral veins prominent. Upper glume surface glabrous or pilose. Upper glume hairs 0.1–1 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1.1 length of fertile lemma, 1 length of spikelet, 5 -veined, glabrous or pilose, bearing hairs 0.1–1 mm long. Fertile lemma elliptic, 2–3 mm long, indurate, yellow, shiny, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.3 mm long. Anthers 3, 1–1.2 mm long, purple. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.