

Racemobambos celebica S. Dransfield. *Kew Bull.*, 47(4): 707 (1992).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *M.J.S. Sands* 575, 23 Nov 1969, Indonesia: Celbes I.: South Sulawesi: Enrekang Dist., Latimojong Mountains, slopes between Loco Melilin & Bunte Pinti, below Pinti Aloan, ca. 4 km SE of Bunte Djakke, 2,500 mt (L, US-3327810).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *-ica*, belonging to. From Celebes, now Sulawesi, Indonesia.

Classification. Subfamily Bambusoideae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes elongated, pachymorph. Butt sheaths absent. Culms scandent, 3–6 mm diam., woody. Culm-internodes terete, thin-walled, 17 cm long. Culm-nodes brown, pubescent. Lateral branches dendroid. Branch complement many, in a clump, with 1 branch dominant, as thick as stem. Culm-sheaths present, without auricles. Leaves cauline. Leaf-sheaths glabrous on surface to pubescent. Leaf-sheath oral hairs setose, 6 mm long. Ligule a ciliolate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 3–13 cm long, 5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle, comprising 3–9 fertile spikelets, bracteate at pedicel base. Panicle open, ovate, 3 cm long, bearing few spikelets. Panicle axis pubescent. Spikelets solitary. Fertile spikelets sessile and pedicelled.

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 lanceolate, laterally compressed, 15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes flattened, 2 mm long, glabrous.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume ovate, 1 mm long, 0.25–0.33 length of upper glume, membranous, without keels. Lower glume surface glabrous or puberulous. Lower glume apex acute. Upper glume ovate, 3–4 mm long, 0.6 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 5–7 mm long, membranous, without keel, 7–9 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins pubescent. Lemma apex acuminate. Palea 6 mm long, 4 -veined. Palea surface glabrous or puberulous, hairy on back. Apical sterile florets distinct from fertile, 1 in number, rudimentary.

Flower and Fruit. Lodicules 3, 1 mm long, ciliate. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sulawesi.

Racemobambos ceramica S. Dransfield. *Reinwardtia*, 9(4): 386 (1980).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: *Seram: Makina*, 1000–1100 m, in the forest, 18 May 1919, *Rutten* 2234 (HT: BO).

Illustrations (Journals): *Reinwardtia* (9: 387, fig.1 (1980)).

Derivation (Clifford & Bostock 2007): Gk. *-ica*, belonging to. From Seram, Indonesia.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes elongated, pachymorph. Butt sheaths absent. Culms scandent, woody. Culm-internodes terete, thin-walled, smooth. Lateral branches dendroid. Branch complement several, in a clump. Culm-sheaths present, without auricles. Leaves cauline. Leaf-sheath oral hairs setose, 5–8 mm long. Ligule a ciliolate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 7–13.5 cm long, 5–7 mm wide. Leaf-blade surface glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, bearing few spikelets. Panicle axis puberulous. Panicle branches puberulous. Spikelets solitary. Fertile spikelets sessile and pedicelled.

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, 22–32 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes flattened, 5 mm long, glabrous.

Glumes. Glumes several, 3 empty glumes, persistent, dissimilar, shorter than spikelet. Lower glume lanceolate, 1.5 mm long, 0.4–0.6 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 6.3 mm long, 0.9 length of adjacent fertile lemma, membranous, without keels, 10 -veined. Upper glume apex obtuse.

Florets. Fertile lemma ovate, 7–8.5 mm long, 3 mm wide, membranous, without keel, 10 -veined, more than 3-veined. Lemma surface puberulous. Lemma margins pubescent. Lemma apex acuminate. Palea 6.5 mm long, 8 -veined. Palea keels ciliate. Apical sterile florets distinct from fertile, 1 in number, rudimentary.

Flower and Fruit. Lodicules 3, 2 mm long, ciliate. Anthers 6, 3 mm long. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

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

Country /Province /State. Malesia. Moluccas.

Racemobambos congesta (Pilger) Holttum. *Kew Bull.* xxi. 282 (1967).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from PNG. **Basionym or Replaced Name:** *Arundinaria congesta* Pilg., *Engl. Jahrb.* 52: 173 (1914). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Guinea, Bismarck Mts.: *Schlechter 18836*; New Guinea, Tami-Mundung: *Schultze 277*.

Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Butt sheaths absent. Culms scandent, 2000 cm long. Culm-internodes terete, thin-walled, distally glabrous. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement several or many. Culm-sheaths present, deciduous, chartaceous, glabrous, without auricles. Leaves cauline, 3–6 per branch. Leaf-sheath oral hairs setose, 7 mm long. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 6–15 cm long, 4–5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base. Racemes 1, single, paucilateral, bearing few fertile spikelets, bearing 8 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 lanceolate, laterally compressed, 20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3 mm long.

Glumes. Glumes two, persistent, shorter than spikelet.

Florets. Fertile lemma ovate, 5–5.5 mm long, chartaceous, without keel, more than 3-veined. Palea 2 -veined. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 1 mm long, ciliate. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

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

Country /Province /State. Malesia, Papuasia. New Guinea.

Racemobambos gibbsiae (Stapf) Holttum. *Gard. Bull. Singapore*, xv. 272 (1956).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia. **Basionym or Replaced Name:** *Bambusa gibbsiae* Stapf, *J. Linn. Soc., Bot.* 42: 189 (1914). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Borneo, Mt Kinabalu: *Gibbs 4091* (K syn); Borneo, Kamburangau: *Gibbs 4232* (K syn).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Lilian Suzette Gibbs (1870–1925) English traveller and botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes elongated, pachymorph. Butt sheaths absent. Culms scandent, 6–12 mm diam. Culm-internodes terete, thin-walled. Lateral branches dendroid. Branch complement several or many, in a clump, with 1 branch dominant. Culm-sheaths present, without auricles. Leaves cauline, 6–8 per branch. Leaf-sheath oral hairs setose, 4–5 mm long. Ligule a ciliolate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 4–10 cm long, 3.5–4 mm wide.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base (1mm long). Racemes 1, single, paucilateral, 2–5 cm long, bearing few fertile spikelets, bearing 2–5 fertile spikelets on each. 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 elliptic, laterally compressed, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5 mm long, pubescent, hairy at tip.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume ovate, 5 mm long, 0.6–0.7 length of upper glume, membranous, without keels, 5 -veined. Lower glume margins ciliolate. Lower glume apex acute. Upper glume ovate, 7–8 mm long, 0.7–0.8 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 10–11 mm long, membranous, without keel, 7–9 -veined, more than 3-veined. Lemma margins pubescent. Lemma apex acute, mucronate. Principal lemma awn 0.5–1 mm long overall. Palea keels ciliolate, adorned above. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, ciliate. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Racemobambos glabra Holttum. *Gard. Bull. Singapore*, xv. 270 (1956).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia, Sarawak. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Bornea: Sarawak: Upper Baram Basin River, Gn. Temabok, 1750 m, 10 Nov 1920, *Moulten SFN* 6797 (HT: K; IT: SING).

Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Butt sheaths absent. Culms leaning, 12 mm diam. Culm-internodes terete, thin-walled, 25–30 cm long, smooth, distally pruinose (below nodes). Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement many, with 1 branch dominant. Culm-sheaths present, deciduous, chartaceous, glabrous, truncate at apex, without auricles, ciliate on shoulders. Culm-sheath ligule entire. Culm-sheath blade lanceolate, erect or spreading, glabrous on surface. Leaves cauline. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 7–8 cm long, 3–5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base. Racemes 1, single, paucilateral, 2–3 cm long, bearing few fertile spikelets, bearing 3–4 fertile spikelets on each. 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 lanceolate, laterally compressed, 10–17 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 3 empty glumes, persistent, shorter than spikelet.

Florets. Fertile lemma ovate, 5 mm long, chartaceous, without keel, more than 3-veined. Palea 10 mm long. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Racemobambos hepburnii S. Dransfield. *Kew Bull.*, 37(4): 670 (1983).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia, Sabah. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sabah: Mt. Kinabalu, Mesilau, 1500 m, 24 Jan 1964, *Chew & Corner RSNB 41111* (HT: K; IT: L).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): In honor of A. John Hepburn.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Butt sheaths absent. Culms leaning or scandent, 8–9 mm diam. Culm-internodes terete, thin-walled, 25 cm long, distally glabrous. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement many, with 1 branch dominant. Culm-sheaths present, deciduous, 17.5 cm long, chartaceous, smooth, glabrous, without auricles, setose on shoulders. Culm-sheath ligule ciliate. Culm-sheath blade lanceolate, deciduous, reflexed. Leaves cauline. Leaf-sheaths glabrous on surface to pubescent, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 6–12 cm long, 4–8 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base. Racemes 1, single, paucilateral, 13–25 cm long, bearing few fertile spikelets, bearing 3–7 fertile spikelets on each. Rhachis glabrous on surface. 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 lanceolate, laterally compressed, 30–50 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5 mm long, glabrous.

Glumes. Glumes several, 3 empty glumes, persistent, shorter than spikelet.

Florets. Fertile lemma ovate, 9 mm long, chartaceous, without keel, more than 3-veined. Palea 8–9 mm long. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Racemobambos hirsuta Holttum. *Gard. Bull. Singapore*, xv. 272 (1956).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia, Sabah. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *M.S. Clemens s.n.*, 15 Jan 1933, Malaysia: Borneo: Sabah State (SING; IT: L, US-2182689 (fragm.)). Publication states collection date as 1953.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. hairy. Plant hairy in respect to all or some parts.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped loosely. Butt sheaths absent. Culms erect or leaning, 300–500 cm long, 5–10 mm diam. Culm-internodes terete, thin-walled, 40–60 cm long, distally glabrous. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement several, with subequal branches. Culm-sheaths present, deciduous, chartaceous, glabrous, hairy on margins, without auricles. Culm-sheath blade lanceolate, reflexed, 7–8 cm long, 5 mm wide, glabrous on surface. Leaves cauline, 6–8 per branch. Leaf-sheath oral hairs setose. Ligule an eciliate membrane, 3 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 15–25 cm long, 30–40 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base. Racemes 1, single, paucilateral, 15 cm long, bearing few fertile spikelets, bearing 4–5 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, laterally compressed, 50–60 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 10 mm long, pubescent.

Glumes. Glumes two, persistent, shorter than spikelet.

Florets. Fertile lemma ovate, 12 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pubescent. Palea surface pubescent. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Racemobambos hirta Holttum. *Kew Bull.* xxi. 283 (1967).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Papua New Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: ANU 733, 07 Oct 1962, Papua New Guinea: New Guinea, Western Highlands, Sirunki, 2,652 m (L).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. hairy. Hairy in part or extensively.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial. Butt sheaths absent. Culms scandent. Culm-internodes terete, thin-walled, distally glabrous. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement many, with 1 branch dominant. Culm-sheaths present, deciduous, chartaceous, glabrous, without auricles. Leaves cauline. Leaf-sheath oral hairs setose, 6–10 mm long. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear, 4–8 cm long. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle, comprising 10 fertile spikelets, bracteate at pedicel base, embraced at base by subtending leaf. Panicle 3–4 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 4 mm long, pubescent.

Glumes. Glumes two, persistent, shorter than spikelet.

Florets. Fertile lemma ovate, 7 mm long, chartaceous, without keel, more than 3-veined. Lemma surface hirsute. Palea 2–3 -veined. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 1 mm long. Anthers 6, 3 mm long. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuasiasia. New Guinea.

Racemobambos holttumii S. Dransfield. *Kew Bull.*, 37(4): 670 (1983).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Solomon Islands. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Solomon Islands: SW Guadalcanal, Duidi area, ridge top, c. 750 m, well drained primary forest, 8 Oct 1968, Mauriasi *et al.* BSIP 12062 (HT: K).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Richard Eric Holttum (1895–1990) English botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Butt sheaths absent. Culm-internodes terete, thin-walled. Lateral branches dendroid. Branch complement several. Culm-sheaths present. Leaves cauline. Leaf-sheaths glabrous on surface or pubescent. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 5–11 cm long, 4–6 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, comprising 10–25 fertile spikelets, bracteate at pedicel base. Panicle open, ovate, 3–9 cm long, bearing few spikelets. Panicle axis glabrous. 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 linear, laterally compressed, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 3 empty glumes, persistent, shorter than spikelet. Lower glume ovate, 1.5 mm long. Upper glume ovate, 4 mm long, 7 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins ciliate. Lemma apex acute. Palea 4 mm long. Palea surface pubescent, hairy above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia, Pacific.

Country /Province /State. Papuasia. Solomon Is.

Racemobambos kutaiensis S. Dransfield. *Kew Bull.*, 37(4): 674 (1983).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Borneo: Kalimantan Timur, West Kutai, Kemul, 1800 m, forest, common above 1700 m, 13 Oct 3997, Endert 3997 (HT: BO; IT: L).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From West Kutai, Borneo.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Butt sheaths absent. Culm-internodes terete, thin-walled. Lateral branches dendroid. Branch complement several. Culm-sheaths present. Leaves cauline. Leaf-sheaths glabrous on surface or puberulous, outer margin glabrous or hairy. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, conduplicate or convolute, 15–17 cm long, 5–7 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, comprising 5–12 fertile spikelets, bracteate at pedicel base. Panicle open, linear, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Panicle axis glabrous or puberulous. 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 linear or oblong, laterally compressed, 34–42 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5 mm long.

Glumes. Glumes several, 3 empty glumes, persistent, shorter than spikelet. Lower glume lanceolate, 3 mm long, 1 -veined. Lower glume lateral veins absent. Upper glume ovate, 9 mm long, 7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 12–15 mm long, chartaceous, without keel, 11 -veined, more than 3-veined. Lemma apex acuminate. Palea 11–12 mm long, 8–10 -veined. Palea keels pubescent. Palea surface pubescent, hairy above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, ciliate. Anthers 6, 7 mm long. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.
Country /Province /State. Malesia. Borneo.

Racemobambos multiramosa Holttum. *Kew Bull.* xxi. 282 (1967).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Papua new Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R.D. Hoogland & R. Pullen 5943*, 17 Aug 1956, Papua New Guinea: New Guinea (LAE; IT: L, US-2236832).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. multus*, many; *ramus*, branch; *-osa*, abundance. Culms much branched.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Butt sheaths absent. Culms leaning. Culm-internodes terete, thin-walled, scaberulous, distally pubescent, with reflexed hairs. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement many. Culm-sheaths present, deciduous, chartaceous, glabrous, without auricles. Leaves cauline. Leaf-sheath oral hairs ciliate, 5 mm long. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear, 4–9 cm long, 3.5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base. Racemes 1, single, paucilateral, bearing few fertile spikelets, bearing 3–4 fertile spikelets on each. 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 lanceolate, laterally compressed, 30–45 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 6–6.5 mm long.

Glumes. Glumes two, persistent, shorter than spikelet.

Florets. Fertile lemma ovate, 8.5 mm long, chartaceous, without keel, more than 3-veined. Palea 8–10 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 1.5 mm long. Anthers 6, 4.5 mm long. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuasias. New Guinea.

Racemobambos novohibernica S. Dransfield. *Kew Bull.*, 37(4): 676 (1983).

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

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Ireland: Namatanai Subprov., ridge of Mt. Angil, mountain forest above 2000 m, Oct 1975, *Sands et al. 2358* (HT: K).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. novum*, new; *Hibernia*, Ireland; *-ica*, belonging to. From New Ireland, part of the Bismark Archipelago, Papua New Guinea.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Butt sheaths absent. Culms 600–800 cm long, 5–11 mm diam. Culm-internodes terete, thin-walled, 15–20 cm long, yellow or light green. Lateral branches dendroid. Branch complement many. Culm-sheaths present. Leaves cauline. Leaf-sheaths pubescent. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear, 4–10 cm long, 3.5–4 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, comprising 6–11 fertile spikelets, bracteate at pedicel base. Panicle open, linear, 4–6 cm long, bearing few spikelets. Panicle axis glabrous or pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 or oblong, laterally compressed, 12–30 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 3 empty glumes, persistent, shorter than spikelet. Lower glume lanceolate, 2.5 mm long, 1-keeled. Lower glume primary vein scabrous. Lower glume apex acuminate or attenuate. Upper glume ovate, 7 mm long, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 10 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface glabrous to pubescent. Lemma margins ciliolate, hairy above. Lemma apex acuminate. Palea 6.5 mm long, 5–7 -veined. Palea surface pubescent, hairy above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuaasia. Bismark Archipelago.

Racemobambos prainii K.M. Wong. *Sandakania*, 1: 3 (1992).

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

Illustrations: None found.

Derivation (Clifford & Bostock 2007): In honor of Datuk Pairin Kitingan (1940-) former Chief Minister of Sabah.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped loosely. Butt sheaths absent. Culms erect or scandent, pendulous at the tip, 300–500 cm long, 5–9 mm diam. Culm-internodes terete, thin-walled, 30–40 cm long, distally glabrous. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement two or three or several, with 1 branch dominant. Culm-sheaths present, deciduous, chartaceous, glabrous, concave at apex, without auricles, glabrous on shoulders. Culm-sheath ligule 1 mm high. Culm-sheath blade linear, spreading or reflexed. Leaves cauline. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 2–4 mm long, obtuse. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 7–24 cm long, 15–30 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base. Racemes 1, single, paucilateral, 7–11 cm long, bearing few fertile spikelets, bearing 4–5 fertile spikelets on each. Rhachis pubescent on surface. 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 lanceolate, laterally compressed, 45–60 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 7 mm long, pubescent.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume 4–8 mm long. Lower glume surface pubescent. Upper glume 14 mm long. Upper glume surface pubescent.

Florets. Fertile lemma ovate, 14–16 mm long, coriaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma apex mucronate. Palea surface puberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

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

Country /Province /State. China. China South Central. **Indian Subcontinent.** Assam.

Racemobambos raynalii Holttum. *Adansonia*. 15(1): 95 (1975).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Guinea: Irian Jaya: region du Mt. Cartensz, Tembapapura, foret a Mousses escarpee, dans les environs de la station radio du Mile 64, 2600 m, *Raynal 17642* (HT: P; IT: BO, BR, K) 8 May 1973.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Aline Marie Roques Raynal (1933-) French botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes elongated, pachymorph. Butt sheaths absent. Culms scandent, 6 mm diam., woody. Culm-internodes terete, thin-walled, 15 cm long. Lateral branches dendroid. Branch complement several, in a clump, with subequal branches or 1 branch dominant. Culm-sheaths present, without auricles. Leaves cauline. Leaf-sheath oral hairs setose, 5–10 mm long. Ligule a ciliolate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear or lanceolate, 10–17 cm long, 4–8 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, bearing few fertile spikelets, bearing 4–8 fertile spikelets on each. Rhachis pilose on surface. Spikelets solitary. Fertile spikelets sessile.

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 elliptic, laterally compressed, 35–45 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes flattened, 4 mm long, glabrous.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 4–5 mm long, 0.75 length of upper glume, membranous, without keels. Lower glume surface puberulous. Lower glume apex acute. Upper glume ovate, 5.5–6.5 mm long, 1.1 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume surface puberulous, hairy at apex. Upper glume apex acute.

Florets. Fertile lemma ovate, 5 mm long, membranous, without keel, 7 -veined, more than 3-veined. Lemma margins pubescent. Lemma apex acute. Palea 5.5 mm long, 4–6 -veined. Palea keels ciliolate. Palea apex ciliate. Apical sterile florets distinct from fertile, 1 in number, rudimentary.

Flower and Fruit. Lodicules 3, 1–1.5 mm long, ciliate. Anthers 6, 3.5 mm long. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuasias. Borneo. New Guinea.

Racemobambos rigidifolia Holttum. *Gard. Bull. Singapore*, xv. 273 (1956).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia, Sabah. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Carr SFN 27438*, Borneo: Sabah: Penibukan Ridge, 1500 m, (SING).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. rigidus*, stiff; *folium*, leaf. Leaf-blades rigid.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Butt sheaths absent. Culms leaning, 5–7 mm diam. Culm-internodes terete, thin-walled, 40–50 cm long, yellow or light green, distally glabrous. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement three or several, with subequal branches. Culm-sheaths present, deciduous, chartaceous, glabrous, without auricles, ciliate on shoulders. Culm-sheath ligule ciliate. Culm-sheath blade lanceolate, reflexed, 15 cm long. Leaves cauline, 8–18 per branch. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 20–25 cm long, 30–40 mm wide, stiff. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base. Racemes 1, single, paucilateral, 20 cm long, bearing few fertile spikelets, bearing 2–3 fertile spikelets on each. 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 lanceolate, laterally compressed, 30 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 8 mm long, glabrous.

Glumes. Glumes two, persistent, shorter than spikelet.

Florets. Fertile lemma ovate, 15 mm long, chartaceous, without keel, more than 3-veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Racemobambos rupicola Widjaja. *Reinwardtia* 11(2): 126 (1997).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Irian Jaya, Ekamanida: *Widjaja 6644* (BO holo, K, L, MAN).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. rupes*, rock; *-cola*, dweller. Growing on rocky slopes.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped loosely. Butt sheaths absent. Culms scandent, pendulous at the tip, 2000 cm long, 20–30 mm diam., woody. Culm-internodes terete, thin-walled, 25 cm long, distally pilose. Lateral branches dendroid. Branch complement three or several, with 1 branch dominant. Culm-sheaths present, deciduous, 16.3–18.5 cm long, chartaceous, glabrous, without auricles, glabrous on shoulders. Culm-sheath ligule 1 mm high, entire. Culm-sheath blade triangular, erect, 9.8–15 cm long, 13–18 mm wide, glabrous on surface. Leaves cauline, 3–7 per branch. Leaf-sheath oral hairs setose, 10 mm long. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear, 5.5–12.5 cm long, 3–5 mm wide. Leaf-blade surface glabrous. Flowering specimens unknown.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuasiasia. New Guinea.

Racemobambos schultzei (Pilger) Holttum. *Kew Bull.* xxi. 283 (1967).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Papua New Guinea. **Basionym or Replaced Name:** *Arundinaria schultzei* Pilg., *Bot. Jahrb. Syst.* 52: 172 (1914). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Nordostl. Neu-Guinea: Augusta-Fluss, Sepik, Sep 1910, *L. Schultze* 293 (HT: B).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Leonard Sigismund Schultze (1872–1955) German botanist and traveller.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Butt sheaths absent. Culms leaning. Culm-internodes terete, thin-walled, distally glabrous. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement several (below) or three (above), with subequal branches (below) or 1 branch dominant (above). Culm-sheaths present, deciduous, chartaceous, glabrous, without auricles. Leaves cauline. Leaf-sheath oral hairs ciliate, 5–7 mm long. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 9–18 cm long, 5–10 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle, bracteate at pedicel base. Panicle bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 25 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 7 mm long.

Glumes. Glumes two, persistent, shorter than spikelet.

Florets. Fertile lemma ovate, 10.5–12 mm long, chartaceous, without keel, more than 3-veined. Palea surface pubescent, hairy on back, hairy above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 2 mm long, ciliate. Anthers 6. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesiasia, Papuasiasia. New Guinea.

Racemobambos sessilis Widjaja. *Reinwardtia* 11(2): 128 (1997).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Irian Jaya, Ekamanida: *Widjaja 6646* (BO holo).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. sessile*. Leaves sessile.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped loosely. Butt sheaths absent. Culms leaning, 2000 cm long, 5 mm diam., woody. Culm-internodes terete, thick-walled, 40–50 cm long. Culm-nodes pubescent. Lateral branches dendroid. Branch complement several, with subequal branches or 1 branch dominant. Culm-sheaths present, deciduous, 8.5–12.5 cm long, chartaceous, hispid, with white hairs or black hairs, glabrous on margins or hairy on margins, without auricles, setose on shoulders, shoulders with 10–12 mm long hairs. Culm-sheath ligule 0.5–1 mm high, entire. Culm-sheath blade lanceolate, as wide as sheath at base, erect, 1.3–6.5 cm long, 1–2 mm wide. Leaves cauline. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, 8–13 mm long. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades linear, 4.5–16.5 cm long, 3–5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base, embraced at base by subtending leaf. Racemes 1, single, paucilateral, 3–4 cm long, bearing few fertile 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 lanceolate, laterally compressed, 24–28 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2–3 mm long, pubescent.

Glumes. Glumes one the lower absent or obscure, persistent, shorter than spikelet. Upper glume ovate, 8 mm long. Upper glume apex acute, mucronate.

Florets. Fertile lemma ovate, 8–10 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acute, mucronate. Palea 6–7 length of lemma, 2 -veined, 2-keeled but the uppermost without keels (weakly). Apical sterile florets 1 in number, rudimentary.

Flower and Fruit. Lodicules absent. Anthers 6, 3 mm long, yellow. Stigmas 3. Ovary with a few apical hairs. Caryopsis with adherent pericarp.

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

Country /Province /State. **Papuasiasia.** New Guinea.

Racemobambos setifera Holttum. *Gard. Bull. Singapore*, xv. 271 (1956).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Malay Peninsula: Johore, Gunong Pulai, 23 Apr. 1922, *Best SFN 7707* (HT: SING).

Illustrations: None found.

Images: H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);.

Derivation (Clifford & Bostock 2007): *L. seta*, bristle; *fero*, carry or bear. Rhachis sparsely setose.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes elongated, pachymorph. Butt sheaths absent. Culms 5–10 mm diam. Culm-internodes terete, thin-walled. Lateral branches dendroid. Culm-sheaths present. Leaves cauline, 5–8 per branch. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1 cm long. Leaf-blades lanceolate, 10–18 cm long, 8–12 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy abaxially.

Inflorescence. Inflorescence composed of racemes, bracteate at pedicel base. Racemes 1, single, paucilateral, 2–4 cm long, bearing few fertile spikelets, bearing 2–5 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 lanceolate, laterally compressed, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3–4.5 mm long.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume lanceolate, 6 mm long, 0.6–0.7 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 10 mm long, 0.66 length of adjacent fertile lemma, membranous, without keels, keel-less except near apex, 9 -veined. Upper glume margins ciliate. Upper glume apex acute.

Florets. Fertile lemma ovate, 14–15 mm long, membranous, without keel, more than 3-veined. Lemma margins ciliate. Lemma apex setaceously acuminate. Palea 10 mm long. Palea keels ciliate, adorned above. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 3 mm long, ciliate. Anthers 6, 5 mm long. Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Malaya.

Raddia angustifolia T.R. Soderstrom & F.O. Zuloaga. *Brittonia*, 37(1): 32 (1985).

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 Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: T.R. Soderstrom, G.F. Russell, J. Hage 2110, 4 Apr 1976, Brazil: Bahia: Itaju do Colonia Mun. (CEPEC; IT: US-2810732, US-2810731, US-2810730).

Illustrations (Books): E.J.Judziewicz et al, *American Bamboos* (1999) (307, Fig. 187).

Illustrations (Journals): *Brittonia* (37: 33, Fig.6 (1985)).

Derivation (Clifford & Bostock 2007): *L. angustus*, narrow; *folium*, leaf. Leaf-blades narrow.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths absent. Culms erect, 25–30 cm long, wiry. Lateral branches lacking. Leaves cauline, 6–9 per branch. Leaf-sheaths ribbed, pilose. Ligule a ciliate membrane, 0.8–1 mm long. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath, petiole 0.1 cm long, petiole pubescent. Leaf-blades linear or lanceolate, 3–5 cm long, 2–4 mm wide. Leaf-blade margins scabrous. Leaf-blade apex acute. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence composed of racemes, axillary, embraced at base by subtending leaf. Axillary inflorescences present in lower axils. Racemes 1, single, bearing few fertile spikelets, bearing 2–3 fertile spikelets on each. Rhachis angular. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets sessile and pedicelled, 1 in a cluster or 2 in a cluster. Pedicels present, filiform (male) or cuneate (female).

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 ovate, dorsally compressed, 3.2–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3–3.8 mm long, 0.8–1 length of upper glume, chartaceous, firmer on margins, pallid, without keels, 5 -veined. Lower glume surface asperulous, rough at apex, glabrous. Lower glume apex acuminate. Upper glume lanceolate, 3.2–4.5 mm long, 1.2–1.7 length of adjacent fertile lemma, chartaceous, with cartilaginous margins, pallid, without keels, 3 -veined. Upper glume surface asperulous, rough at apex. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma elliptic, 2.6 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea coriaceous, 2 -veined.

Flower and Fruit. Lodicules 3. Anthers 3, 2.2–3 mm long.

Male inflorescence terminal, unlike female, a panicle or of few spikelets (5–15). Male spikelets distinct from female, 1 flowered, separately deciduous, linear, 4.5 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Bahia, Ceará, Pernambuco.

Raddia brasiliensis Bertol. *Bologn. Opusc. Sc.* iii. 410 (1819).

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 Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. Raddi s.n.*, no date, Brazil: Rio de Janeiro (BOLO; IT: BM (photo, F), FI (2 sheets), PI, US-2877981 (fragm.)).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (32, Fig. 9).

Images: E.J.Judziewicz, E.J., *American Bamboos* (1999);.

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

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Butt sheaths absent. Culms 30–60 cm long. Leaves cauline. Ligule an eciliate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades oblong, 4–12 cm long, 9–25 mm wide. Leaf-blade apex obtuse, apiculate. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence composed of racemes, axillary, embraced at base by subtending leaf. Racemes 1, single, 1–3 cm long, bearing few fertile spikelets, bearing 4–8 fertile spikelets on each. Rhachis angular. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform (male) or cuneate (female).

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 ovate, dorsally compressed, 4 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 4 mm long, 1 length of upper glume, chartaceous, without keels, 5 -veined. Lower glume surface pubescent. Lower glume apex acuminate, awned, 1 -awned, awn 2 mm long. Upper glume ovate, 4 mm long, 1 length of adjacent fertile lemma, chartaceous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 3.5–4 mm long, coriaceous, without keel, 5 -veined, 0–3 -veined. Lemma margins involute. Lemma apex obtuse. Palea coriaceous, 2 -veined. Palea surface pubescent, hairy on back.

Flower and Fruit. Male inflorescence terminal, unlike female, a panicle (4–6cm). Male spikelets distinct from female, 1 flowered, separately deciduous, linear, 5 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined, awned (1mm).

n = 11 (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil Southeast.

Mato Grosso, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo. Mato Grosso do Sul. Bahia, Ceará, Pernambuco. Rio de Janeiro.

Raddia distichophylla (Steud. ex Nees) Chase. *Proc. Biol. Soc. Washington*, xxi. 184 (1908).

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 Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Strephium distichophyllum* Schrad. ex Nees, *Fl. Bras. Enum. Pl.* 2(1): 298–299 (1829). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Prince Maximilian s.n.*, (1816), Brazil: Bahia: B; IT: US-2942618 (fragm.), *fide* Olivera et al, *Kew Bull.* 64:736 (2009).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (32, Fig. 9).

Images: E.J.Judziewicz, E.J., *American Bamboos* (1999);.

Derivation (Clifford & Bostock 2007): Gk. *distichos*, in two rows; *phyllon*, leaf. Leaves arranged conspicuously in two rows.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths absent. Culms erect, 12–35 cm long, wiry. Culm-nodes swollen (to form a lip), bearded. Leaves cauline, 10–12 per branch,

distichous. Ligule an eciliate membrane. Leaf-blade base broadly rounded (truncate), asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades ovate, 1.2–2.2 cm long, 6–11 mm wide. Leaf-blade apex obtuse, apiculate. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence composed of racemes, axillary, embraced at base by subtending leaf. Racemes 1, single, 1 cm long, bearing few fertile spikelets. Rhachis angular. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform (male) or cuneate (female).

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, dorsally compressed, acuminate, 3–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 3–5 mm long, 1 length of upper glume, chartaceous, without keels, 5 -veined. Lower glume surface glabrous. Lower glume apex caudate. Upper glume elliptic, 3–5 mm long, 0.8–0.9 length of adjacent fertile lemma, chartaceous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex caudate.

Florets. Fertile florets female. Fertile lemma ovate, 2.5–4.5 mm long, coriaceous, shiny, without keel, 5 -veined, 0–3 -veined. Lemma margins involute. Lemma apex obtuse. Palea coriaceous, 2 -veined.

Flower and Fruit. Male inflorescence terminal or axillary, unlike female, a panicle (1.5–2cm). Male spikelets distinct from female, 1 flowered, separately deciduous, elliptic, 4–6 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.
Bahia. Bahia.

Raddia guianensis (Brongn.) Hitchcock. *U. S. Dept. Agric., Misc. Publ. No. 243* :373 (1936).

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 Grasses* (2006).

TYPE from French Guiana. **Basionym or Replaced Name:** *Strephium guianense* Brongn., *Bull. Soc. Bot. France* 7: 470 (1860). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Leprieur* 430A., 1834, French Guiana; P ; ILT US-2942619 and US-2942620, *fide* Oliveria et al *Kew Bull.* 64: 737 (2009) .

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (373, Fig. 341), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig. 91).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From British Guiana, now Guyana.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths absent. Culms geniculately ascending, 20–45 cm long, wiry. Leaves cauline, 12–24 per branch, distichous. Leaf-sheaths longer than adjacent culm internode. Ligule an eciliate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades spreading, oblong, 2–3.5 cm long, 4–8 mm wide. Leaf-blade apex obtuse, apiculate. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence composed of racemes, axillary, embraced at base by subtending leaf. Racemes 1, single, bearing few fertile spikelets, bearing 2–5 fertile spikelets on each. Rhachis angular. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform (male) or cuneate (female).

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, dorsally compressed, 8 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 8 mm long, 1 length of upper glume, chartaceous, firmer on margins, without keels, 5 -veined. Lower glume surface glabrous. Lower glume apex setaceously acuminate. Upper glume ovate, 8 mm long, 1.6 length of adjacent fertile lemma, chartaceous, with cartilaginous margins, without keels, 5 -veined. Upper glume apex setaceously acuminate.

Florets. Fertile florets female. Fertile lemma lanceolate, 5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma margins involute. Lemma apex acuminate. Palea coriaceous, 2 -veined.

Flower and Fruit. Lodicules 3. Anthers 3.

Male inflorescence axillary, unlike female, of few spikelets (5–8). Male spikelets distinct from female, 1 flowered, separately deciduous, linear or lanceolate, 5–6 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America, Brazil. Trinidad-Tobago. French Guiana, Venezuela. Brazil Northeast, Brazil North.

Alagoas, Bahia, Pernambuco, Rio Grande do Norte (RN). Amapa, Pará.

Raddia lancifolia R.P. Oliveira & Longhi-Wagner. *Pl. Syst. Evol.* 207(3–4): 175–176, f. 8 (2008).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Espírito Santo: Linhares, Reserva Florestal de Linhares, estrada municipal Joco Pedro, km 0.2, próximo ?casa do guarda, 19°24'S, 40°8'W, 21 Nov 2003. Oliveira, Carneiro-Torres & Folli 980 HT: HUEFS; IT: CEPEC, ICN, ISC, K, P, RB, US.

Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect, (40–)45–85 cm long, 1.2–1.7 mm diam. Culm-internodes distally pilose. Culm-nodes green, glabrous. Lateral branches lacking. Leaves cauline, 4–11 per branch. Leaf-sheaths pilose. Ligule a ciliolate membrane, 0.8–1.3 mm long. Leaf-blade base symmetrical, with a brief petiole-like connection to sheath, petiole (0.08–)0.1–0.2 cm long, petiole pubescent. Leaf-blades lanceolate, 9.3–17.3 cm long, 12–21 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins scabrous. Leaf-blade apex acute, asymmetrical and apiculate. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence composed of racemes, axillary, with 1–2 peduncles per sheath. Peduncle (2–)2.5–6.2(–8) cm long. Racemes 1, single, 2–5 cm long, 3–6 mm wide, bearing few fertile spikelets, bearing 4–13 fertile spikelets on each. Rhachis angular, scabrous on surface. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform (male) or cuneate (female), pubescent.

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 or ovate, dorsally compressed, (6–)7–13.5 mm long, 1–2(–3) mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 4–11.5(–13) mm long, chartaceous, much thinner on margins, without keels, 5–7 -veined. Lower glume apex acuminate, awned, 1 -awned, awn (1–)3–7(–10) mm long. Upper glume lanceolate or ovate, 4–11.5(–13) mm long, chartaceous, with cartilaginous margins, without keels, 5–7 -veined. Upper glume apex acute or acuminate.

Florets. Fertile florets female. Fertile lemma lanceolate, 4–5 mm long, (0.8–)1–2 mm wide, coriaceous, without keel. Lemma margins involute. Lemma apex obtuse. Palea coriaceous.

Flower and Fruit. Anthers 3.

Male inflorescence terminal and axillary, unlike female, a panicle (3,4–8cm). Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 5.5–7.8 mm long, hairy. Male spikelet glumes absent. Male spikelet lemma 3 -veined, awned, with 1.5–3 mm long awn.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil South.

Minas Gerais, Rio de Janeiro, Espírito Santo. Espírito Santo.

Raddia megaphylla R.P. Oliveira & Longhi-Wagner. *Pl. Syst. Evol.* 207(3–4): 173–175, f. 2D, G, 7 (2008).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Espírito Santo: Linhares, Reserva Natural da Companhia Vale do Rio Doce, estrada da Gávea, km 14.2, 21 Nov 2003. *Oliveira, Carneiro-Torres & Folli 981* HT: HUEFS; CEPEC, CVRD, ICN, K, RB, US.

Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 40–65 cm long, 0.4–1 mm diam. Culm-internodes distally glabrous. Culm-nodes brown, pubescent. Lateral branches lacking. Leaves cauline, 1–2 per branch. Leaf-sheaths pilose. 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–)0.15–0.33(–0.47) cm long, petiole pubescent. Leaf-blades lanceolate or ovate, (7.2–)9–24.5 cm long, (20–)31–58 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or hirsute, hairy abaxially. Leaf-blade apex acute, asymmetrical. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence a panicle, comprising (5–)11–31(–42) fertile spikelets, axillary, with 1–3 peduncles per sheath. Peduncle (1–)7.8–15 cm long. Panicle open, ovate, (1.4–)2.4–5(–5.5) cm long, (0.4–)2–3.5 cm wide. Panicle axis pubescent. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform (male) or cuneate (female), ciliate.

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 or ovate, dorsally compressed, (4–)5–9.2 mm long, (1–)1.4–2.2 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 4–10 mm long, chartaceous, much thinner on margins, without keels, 3–5 -veined. Lower glume apex acuminate, mucronate or awned, 1 -awned, awn 0.7–5 mm long. Upper glume lanceolate or ovate, 4–10 mm long, chartaceous, with cartilaginous margins, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma lanceolate, (3.2–)4.5–5.1 mm long, (0.8–)1–1.9 mm wide, coriaceous, without keel. Lemma margins involute. Lemma apex obtuse. Palea coriaceous.

Flower and Fruit. Lodicules 3. Anthers 3. Caryopsis with adherent pericarp, 3 mm long, light brown. Hilum linear, 1 length of caryopsis.

Male inflorescence terminal, unlike female, a panicle (3–9cm). Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 3.5–5.2 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined, awned, with 0.5–0.7 mm long awn.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast, Brazil Southeast.

Bahia. Espírito Santo.

Raddia portoi Kuhlm. *Arch. Jard. Bot. Rio de Janeiro*, iv. 350 (1925).

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 Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *P. Campos-Porto 17936*, 29 Dec 1922, Brazil: Bahia (RB; IT: US-1255915, US-1258832).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (30, Fig. 8).

Derivation (Clifford & Bostock 2007): in honor of Paulo Campos Porto (1889–?) Brazilian plant collector.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Butt sheaths absent. Culms erect, 23–45 cm long, wiry. Culm-nodes swollen (to form a lip), glabrous. Leaves cauline, 4–5 per branch. Ligule an eciliate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades oblong, 3–5.5 cm long, 5–10 mm wide. Leaf-blade surface glabrous. Leaf-blade apex obtuse. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence composed of racemes, axillary, embraced at base by subtending leaf. Racemes 1, single, 1.5–2 cm long, bearing few fertile spikelets, bearing 4–6 fertile spikelets on each. Rhachis angular. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform (male) or cuneate (female).

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, dorsally compressed, acuminate, 3–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3–5 mm long, 1 length of upper glume, chartaceous, without keels, 5 -veined. Lower glume surface glabrous. Lower glume apex acuminate. Upper glume lanceolate, 3–5 mm long, 0.8–1 length of adjacent fertile lemma, chartaceous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 3–4 mm long, coriaceous, shiny, without keel, 5 -veined, 0–3 -veined. Lemma margins involute. Lemma apex obtuse. Palea coriaceous, 2 -veined.

Flower and Fruit. Male inflorescence terminal, unlike female, a panicle (3–5cm). Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 4–5 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast, Brazil Southeast.

Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo. Bahia, Ceará, Pernambuco, Paraíba, Sergipe. Minas Gerais.

Raddia soderstromii R.P. Oliveira, L.G. Clark & Judz. *Pl. Syst. Evol.* 207(3–4): 178–181, f. 2B, 10 (2008).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Bahia: Mun. Aurelio Real, 11 km W of Aurelino Leal on the road to Lajes do Banco, 110 m, 14°0'S, 39°3'W, 16 Feb 1994, disturbed mesophytic forest with granite outcrops. *A.M. de Carvalho, L. Clark, I. Cordeiro, J. Kallunki & J. Pirani 4390*. HT: CEPEC; IT: ISC, K, MO, NY, US.

Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect, (20–)35–78(–100) cm long, (1.5–)2–3 mm diam. Culm-internodes distally glabrous. Culm-nodes brown, pubescent. Lateral branches lacking. Leaves cauline, (2–)3–9(–10) per branch. Leaf-sheaths pubescent. Ligule a ciliate membrane, 0.4–0.7 mm long. Leaf-blade base broadly rounded, asymmetrical, with a brief petiole-like connection to sheath, petiole 0.06–0.2(–0.4) cm long, petiole pubescent. Leaf-blades elliptic or ovate, (4.5–)6–13.5 cm long, (22–)27–37 mm wide. Leaf-blade surface pilose, hairy abaxially or on both sides. Leaf-blade margins scabrous. Leaf-blade apex obtuse, asymmetrical and apiculate. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence composed of racemes, axillary, with 1–4(–6) peduncles per sheath. Peduncle 1.7–7 cm long. Racemes 1, single, 1.8–3.9 cm long, 2–4(–7) mm wide, bearing few fertile spikelets, bearing 4–10(–18) fertile spikelets on each. Rhachis angular, pubescent on surface. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform (male) or cuneate (female), ciliate.

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 or ovate, dorsally compressed, 5–9(–10) mm long, 1–2 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 4.8–9(–10) mm long, chartaceous, much thinner on margins, without keels, 3–5 -veined. Lower glume apex acuminate, muticous or mucronate or awned, 1 -awned, awn (0.6–)1–4(–6) mm long. Upper glume lanceolate or ovate, 4.8–9(–10) mm long, chartaceous, with cartilaginous margins, without keels, 3–5 -veined. Upper glume apex acuminate, muticous or mucronate or awned, 1 -awned, awn (0.6–)1–4(–6) mm long.

Florets. Fertile florets female. Fertile lemma ovate, 4–5.2 mm long, 0.7–1.5 mm wide, coriaceous, without keel. Lemma margins involute. Lemma apex obtuse. Palea coriaceous.

Flower and Fruit. Lodicules 3. Anthers 3.

Male inflorescence terminal, unlike female, a panicle (2.5–9.5 cm). Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 4–5.5 mm long, hairy. Male spikelet glumes absent. Male spikelet lemma 3-veined, muticous or awned, with 1–1.5 mm long awn.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast, Brazil Southeast.

Bahia. Bahia, Rio Grande do Norte (RN), Sergipe. Espirito Santo, Minas Gerais, Rio de Janeiro. Rio Grande do Sul.

Raddia stolonifera R.P. Oliveira & Longhi-Wagner. *Pl. Syst. Evol.* 207(3–4): 176–178, f. 2C, E, 9 (2008).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Bahia: Jussari, ca. 9 km da cidade, Serra do Teimos, 15°0'S, 39°5'W, 14 Mar 2001. *Oliveira, Longhi-Wagner & Smidt 1078*. HT: HUEFS; IT: ICN, INPA, ISC, MBM, RB, US.

Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms erect, (23.5–)33–50 cm long, 0.5–1 mm diam. Culm-internodes distally pilose. Culm-nodes brown, pubescent. Lateral branches lacking. Leaves cauline, 13–21 per branch, distichous. Leaf-sheaths pilose. Ligule a ciliolate membrane, 0.5–0.7 mm long. Leaf-blade base truncate or broadly rounded, symmetrical or asymmetrical, with a brief petiole-like connection to sheath, petiole 0.05–0.1 cm long, petiole pubescent. Leaf-blades lanceolate or ovate, 3.5–5.4 cm long, 7–15 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acute, asymmetrical and apiculate. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence composed of racemes, axillary, with 1–2 peduncles per sheath. Peduncle 2.7–3.8 cm long. Racemes 1, single, 1.8–2.5(–3) cm long, 2–4 mm wide, bearing few fertile spikelets, bearing 3–6(–8) fertile spikelets on each. Rhachis angular. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform (male) or cuneate (female), scaberulous.

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 or ovate, dorsally compressed, 4–6.8 mm long, 1–2 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 3–6.8 mm long, chartaceous, much thinner on margins, without keels, 3(–5)-veined. Lower glume apex acuminate, mucronate or awned, 1-awned, awn 0.5–2 mm long. Upper glume lanceolate or ovate, 3–6.8 mm long, chartaceous, with cartilaginous margins, without keels, 3(–5)-veined. Upper glume apex acute or acuminate.

Florets. Fertile florets female. Fertile lemma lanceolate, (3.2–)4–4.7 mm long, 0.7–1.2 mm wide, coriaceous, without keel. Lemma margins involute. Lemma apex obtuse. Palea coriaceous.

Flower and Fruit. Lodicules 3. Anthers 3.

Male inflorescence axillary, unlike female, a panicle (1.5–3.3 cm). Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 5.5–6 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3-veined, awned, with 0.8 mm long awn.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Bahia. Bahia.

Raddiella esenbeckii (Steudel) C.E. Calderon & T.R. Soderstrom. *Smithsonian Contrib. Bot.*, 44: 21 (1980).

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 Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum esenbeckii* Steud., *Syn. Pl. Glumac.* 1: 90 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brasil: in agris et viis ad Ega provinciae Fluminis Nigri, *Martius s.n.* (HT: P) Note from IGS: "P. laterale Nees" Agrost. Bras. "212", error for 213. Brasil, not Presl, Peru, though Nees cites "Panicum laterale Presl, Herb. Haenk." Referred by Doell to Olyra Nana Doell."

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (58, Fig 10), S.A.Renvoize, *The Grasses of Bahia*, 1984 (30, Fig. 8), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (249, Fig. 203), E.Judziwicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig. 91).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 937, Fig.13A-D (1991)).

Derivation (Clifford & Bostock 2007): in honor of Christian Gottfried Daniel Nees von Esenbeck (1776–1858) German botanist.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, mat forming. Butt sheaths absent. Culms prostrate, 6–30 cm long (long). Culm-nodes pubescent. Leaves cauline. Ligule absent. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades ovate, 0.7–2.1 cm long, 5–9 mm wide, coriaceous. Leaf-blade apex obtuse, apiculate. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 2–3 fertile spikelets, axillary, embraced at base by subtending leaf. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, oblong, tip cupuliform.

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, dorsally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus square, incorporating lowest rhachilla internode with adnate lower glume, 0.2 mm long. Rhachilla internodes elongated between glumes.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2 mm long, 1 length of upper glume, herbaceous, without keels, 3 -veined. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 2 mm long, 1 length of adjacent fertile lemma, herbaceous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 2 mm long, indurate, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex obtuse. Palea 1 length of lemma, indurate.

Flower and Fruit. Male inflorescence terminal, unlike female, a panicle. Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 3–4 mm long, glabrous or hairy. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

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

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Panama. Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South.

Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso, Goias, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo. Distrito Federal, Goiás. Bahia. Amazonas, Pará, Roraima. Minas Gerais, Sao Paulo. Paraná.

Raddiella kaieteurana Soderstr. *Mem. N. Y. Bot. Gard.* xii. No. 3, 6 (1965).

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 Grasses* (2006).

TYPE from Guyana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: British Guiana: Essequibo Distr.: Kaieteur Plateau, along trail from Kaieteur Plateau to Tukeit, ca. 1100 ft., 4 Feb 1962, small trailing grass on moist cliff faces in full sun, *Cowan & Soderstrom 1742* (HT: US-2380354; IT: GH, K, NY, P).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (249, Fig. 202 as aff. *kaieteurana*), E.Judziwicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig.92).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 937, Fig.13E-G (1991)).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Kaieteur Plateau, Guyana.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Annual, mat forming. Butt sheaths absent. Culms rambling, weak, 5(–20) cm long, rooting from lower nodes. Leaf-sheaths longer than adjacent culm internode, striately veined, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.3–0.5 mm long. Leaf-blade base broadly rounded, asymmetrical, with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades lanceolate, 0.8–1 cm long, 3–8 mm wide, membranous. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins ciliate, hairy all along or at base. Leaf-blade apex acute, apiculate. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets, axillary, exserted or embraced at base by subtending leaf. Peduncle 0.5–1 cm long. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, 1.5–5 mm long.

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, dorsally compressed, 1.4–2 mm long, 0.6–0.8 mm wide, falling entire. Spikelet callus square, incorporating lowest rhachilla internode with adnate lower glume, 0.2 mm long. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic or ovate, 1.4–2 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface glabrous or pilose. Lower glume apex acuminate. Upper glume elliptic or ovate, 1.4–2 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume surface glabrous or pilose. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma elliptic, 0.8–1.7 mm long, indurate, pallid or light brown, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea 1 length of lemma, indurate.

Flower and Fruit. Anthers 3, 2–2.8 mm long. Caryopsis with adherent pericarp, ellipsoid, 4–5.8 mm long. Embryo 0.2 length of caryopsis. Hilum elliptic.

Male inflorescence terminal, unlike female, of few spikelets (1–2 spikelets). Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 4–5.8 mm long, hairy. Male spikelet glumes absent or 2 (rarely). Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Guyana, Surinam, Venezuela. Brazil North.

Pará.

Raddiella lunata F.O. Zuloaga & E.J. Judziewicz. *Ann. Missouri Bot. Gard.*, 78(4): 936 (1991).

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 Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Rondonia: Serra do Paca Nova, Cab. do Cautario, planta umbrophila, na entrada das lapas, firmes, predas, etc., Mar 1917, *Rondon s.n. [as Kuhlmann 1863]* (HT: RB; IT: K, MO, NY, SI, SP, US).

Illustrations (Books): E.J.Judziewicz et al, *American Bamboos* (1999) (311, Fig. 191).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 938, Fig.14 (1991)).

Derivation (Clifford & Bostock 2007): *L. luna*, moon; *-ata*, possessing. Glumes and lemmas crescent-shaped.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Annual, mat forming. Butt sheaths absent. Culms rambling, slender, 7–15 cm long, rooting from lower nodes. Culm-nodes swollen, pubescent. Leaf-sheaths striately veined. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades lanceolate, 1–1.5 cm long, 2.4–3.5 mm wide, membranous. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade margins scabrous. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence a panicle or comprising only a few spikelets, comprising 1 fertile spikelets, axillary, embraced at base by subtending leaf. Peduncle 0.5–1 cm long. Panicle 0.5–1 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Sexes segregated,

with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled, 1–11 in a cluster (panicle). Pedicels present, 0.5–1.5 mm long.

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 obovate, curved (lunate in profile), dorsally compressed, 1 mm long, falling entire. Spikelet callus square, incorporating lowest rhachilla internode with adnate lower glume, 0.2 mm long. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic or ovate, 0.9 mm long, 0.9 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface pubescent. Lower glume apex acuminate. Upper glume elliptic or ovate, 1 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma obovate, lunate in profile, 0.8–1 mm long, indurate, pallid or light brown, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex rostrate. Palea 1 length of lemma, indurate.

Flower and Fruit. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp, ovoid, 0.6–0.8 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 1.7–2.7 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil North.

Mato Grosso. Rondonia.

Raddiella malmeana (Ekman) Swallen. *Bull. Torr. Bot. Cl.* 1 . 89 (1948).

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 Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Olyra malmeana* Ekman, *Ark. Bot.* 10(17): 21, t. 2, f. 3, t. 6, f. 9 (1911). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.O.A. Malme 1684*, no date, Brazil: Mato Grosso (S (fragm., US-2877979)).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *-ana*, indicating connection. In honor of Gustaf Oskar Andersson Malme (1864–1937) Swedish botanist.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Annual, mat forming. Butt sheaths absent. Culms decumbent, 10–20 cm long, rooting from lower nodes. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 0.3 mm long. Leaf-blade base simple, symmetrical, with a brief petiole-like connection to sheath, petiole glabrous. Leaf-blades elliptic, 0.5–1 cm long, 2–4 mm wide, membranous. Leaf-blade surface pubescent, hairy abaxially or on both sides. Leaf-blade margins scaberulous. Leaf-blade apex acute. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence comprising only a few spikelets, axillary, embraced at base by subtending leaf. Spikelets solitary. Fertile spikelets pedicelled. Male 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 ovate, dorsally compressed, 1.8–2.1 mm long, 0.5–0.6 mm wide, falling entire. Spikelet callus square, incorporating lowest rhachilla internode with adnate lower glume, 0.2 mm long. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic or ovate, 1.8–2.1 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface pilose. Lower glume apex acuminate. Upper glume elliptic or ovate, 1.8–2.1 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume surface pilose. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 1.5 mm long, indurate, pallid, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex acute. Palea 1 length of lemma, indurate.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp.

Male inflorescence terminal, unlike female, of few spikelets. Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 1.7–2 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Southeast. Mato Grosso. Pará.

Raddiella minima E.J.Judziwicz & F.O.Zuloaga. *Ann. Missouri Bot. Gard.*, 78(4): 939 (1991).

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 Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Pará:: Mun. de Itaituba: km 771 estrada Santarem-Cuiba, proximo a divisao Para-Mato Grosso, 9.35S 54.35W, 22 Apr 1983, mata de Cerrado solo, vegetação rupestre, *Amaral et al.* 883 (HT: INPA; IT: MO, NY).

Illustrations (Books): G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990).

Derivation (Clifford & Bostock 2007): L. least. Smallest of the known species.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Annual, mat forming. Butt sheaths absent. Culms rambling, 3–6 cm long. Culm-internodes purple. Culm-nodes pubescent. Leaves 3–5 per branch. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface or pubescent, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.2 mm long. Leaf-blade base broadly rounded, asymmetrical, with a brief petiole-like connection to sheath, petiole glabrous or pubescent. Leaf-blades ovate, 0.4–0.6 cm long, 2.7–3.3 mm wide, membranous. Leaf-blade surface glabrous. Leaf-blade margins scaberrulous. Leaf-blade apex acute, apiculate. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 2 fertile spikelets, axillary, embraced at base by subtending leaf. Spikelets solitary. Fertile spikelets pedicelled. Male 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, dorsally compressed, 1–1.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus square, incorporating lowest rhachilla internode with adnate lower glume, 0.2 mm long. Rhachilla internodes elongated between glumes.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic or ovate, 1–1.4 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface glabrous or pubescent. Lower glume apex acuminate. Upper glume elliptic or ovate, 1–1.4 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume surface glabrous or pubescent. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 0.9–1.2 mm long, indurate, pallid or dark brown, shiny, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth. Lemma margins involute. Lemma apex acute. Palea 1 length of lemma, indurate.

Flower and Fruit. Anthers 3, 0.6 mm long. Caryopsis with adherent pericarp, ovoid or orbicular, 0.7 mm long. Hilum punctiform.

Male inflorescence terminal, unlike female, of few spikelets (1 spikelet). Male spikelets distinct from female, 1 flowered, separately deciduous, elliptic, 1.3 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North. Pará.

Raddiella molliculma (Swallen) C.E.Calderon & T.R.Soderstrom. *Smithsonian Contrib. Bot.*, 44: 22 (1980).

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 Grasses* (2006).

TYPE from Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Colombia: Caquet? (as Vaupés): Cerro de el Castillo, Río Aparoris, moist shaded sandstone ledge with mosses and Selaginella sp., 16 Jan 1942, *G. Gutiérrez & R. E. Schultes 616* (HT: US; IT: COL).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 937, Fig.13H-I (1991)).

Derivation (Clifford & Bostock 2007): *L. molle*, soft; *culmus*, stem. Culms softly hairy.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Annual, mat forming. Butt sheaths absent. Culms rambling, 5–10 cm long. Culm-nodes pubescent. Leaf-sheaths mostly shorter than adjacent culm internode, puberulous, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane. Leaf-blade base broadly rounded, asymmetrical, with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades lanceolate or ovate, 0.7–1.2 cm long, 3–4.5 mm wide, membranous. Leaf-blade surface pubescent. Leaf-blade margins scaberrulous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1–2 fertile spikelets (and 1–2 male), terminal and axillary, exserted. Peduncle 5 cm long. Sexes segregated, with male above. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, 0.5–1 mm long.

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, dorsally compressed, 1.3–1.5 mm long, 0.6–0.7 mm wide, falling entire. Spikelet callus square, incorporating lowest rhachilla internode with adnate lower glume, 0.2 mm long. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic or ovate, 1.3–1.5 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface pilose. Lower glume apex acuminate. Upper glume elliptic or ovate, 1.3–1.5 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma elliptic, 1.3 mm long, indurate, pallid, shiny, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea 1 length of lemma, indurate.

Flower and Fruit. Anthers 3, 0.9–1.3 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 0.8 mm long. Hilum elliptic.

Male spikelets distinct from female, 1 flowered, separately deciduous, elliptic, 1.3–2.2 mm long, hairy. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.

Raddiella potaroensis Soderstr. *Mem. N. Y. Bot. Gard.* xii. No. 3, 6 (1965).

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 Grasses* (2006).

TYPE from Belize. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: British Guiana: Essequibo Dist.: Kaiteur Plateau, bottom of Potaro Gorge near Kaiteur Fall to western rim of splash basin of Fall, ca. 700 m, 13 Mar 1962, common annual forming mats on rocks in full sun in constant mist from falls, blades flat, *Cowan & Soderstrom 2162* (HT: US-2380401; IT: K, NY).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 937, Fig.13J-L (1991)).

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From Potaro Gorge, Guyana.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Annual, mat forming. Butt sheaths absent. Culms decumbent, weak, 5–20 cm long, rooting from lower nodes. Culm-nodes swollen. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 0.2–0.4 mm long. Leaf-blade base

asymmetrical, with a brief petiole-like connection to sheath, petiole glabrous. Leaf-blades elliptic, 0.9–1.7 cm long, 3–7 mm wide, membranous. Leaf-blade surface glabrous or puberulous, sparsely hairy, hairy abaxially. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets (and 1–2 male) or 2–3 fertile spikelets (when all female), axillary, exserted or embraced at base by subtending leaf. Peduncle 0.5–1 cm long. Sexes segregated (or all female), with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, 1–3 mm long.

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 or ovate, dorsally compressed, 1.2–2.3 mm long, falling entire. Spikelet callus square, incorporating lowest rhachilla internode with adnate lower glume, 0.2 mm long. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic or ovate, 1.2–2.3 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume surface pilose. Lower glume apex acute or acuminate. Upper glume elliptic or ovate, 1.2–2.3 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume surface pilose. Upper glume apex acute or acuminate.

Florets. Fertile florets female. Fertile lemma elliptic, 1–1.3 mm long, indurate, pallid, shiny, without keel, 3 -veined, 0–3 -veined. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea 1 length of lemma, indurate.

Flower and Fruit. Anthers 3, 1.7–2 mm long. Caryopsis with adherent pericarp, obovoid, 0.9 mm long. Embryo 0.25 length of caryopsis. Hilum punctiform.

Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 2.7–4.2 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America. Guyana, Venezuela.

Raddiella vanessiae E.J.Judziewicz. *Journal of the Botanical Research Institute of Texas* 1:1–7 (2007).

TYPE from French Guiana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: French Guiana: Savane Lambert 1 (near Montsinery), 4.53°N, 52.31°W, elev. 10 m, V. *Hequet 1281* (HT: US; IT: CAY, K, P).

Illustrations: None found.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Annual, mat forming. Butt sheaths absent. Culms prostrate, 1–2 cm long. Culm-internodes purple, distally glabrous. Culm-nodes pubescent. Lateral branches ample. Leaves 3–5 per branch. Leaf-sheaths inflated, 0.18–0.32 cm long, striately veined, pubescent, with reflexed hairs. Ligule a fringe of hairs, 0.2–0.3 mm long. Leaf-blade base truncate, asymmetrical, with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades ovate, 0.27–0.33 cm long, 1.8–2.1 mm wide, membranous, mid-green and purple, discolorous with last colour beneath. Leaf-blade venation with 12–14 secondary veins. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade margins scaberulous. Leaf-blade apex acute. Monoecious, with male and female spikelets in different inflorescences.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 2–5 fertile spikelets, axillary, embraced at base by subtending leaf. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform, 0.3–1 mm long, glabrous, tip cupuliform.

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, dorsally compressed, 1–1.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus square, incorporating lowest rhachilla internode with adnate lower glume, 0.2 mm long. Rhachilla internodes elongated between glumes.

Glumes. Glumes deciduous, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume linear or ovate, 1–1.4 mm long, 1 length of upper glume, membranous, firmer on margins, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume surface pilose. Lower glume apex acute. Upper glume lanceolate or ovate, 1–1.4 mm long, 1 length of adjacent fertile lemma, membranous, with cartilaginous margins, without keels, 1 -veined or 3 -veined. Upper glume lateral veins absent or obscure. Upper glume surface pilose. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma lanceolate or elliptic or ovate, 0.9 mm long, cartilaginous, pallid, shiny, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth. Lemma margins involute, covering most of palea. Lemma apex acute. Palea 1 length of lemma, cartilaginous, 2-keeled.

Flower and Fruit. Anthers 3, 0.4–0.5 mm long, brown. Stigmas 2. Caryopsis with adherent pericarp, ellipsoid or oblong, 0.65–0.95 mm long, dark brown. Hilum linear, 0.25 length of caryopsis.

Male inflorescence terminal, unlike female, of few spikelets (1–2 spikelets). Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 1.1–1.2 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 1.1–1.2 mm long, 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America. French Guiana.

Ratzeburgia pulcherrima Kunth. *Rev. Gram.* 2:487 (1831).

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).

TYPE from Burma. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Wallich 8868*, Sep 1826, Burma: banks of Irrawaddy River (K).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (207, Fig 12).

Derivation (Clifford & Bostock 2007): L. most beautiful. To be the most beautiful member of a genus.

Classification. Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Rottboelliinae.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms 10–30 cm long. Ligule an eciliate membrane. Leaf-blades 2–8 cm long, 1–2 mm wide. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, 4–8 cm long. Rhachis fragile at the nodes, angular, pubescent on margins. Rhachis internodes linear, together with the pedicel framing edges of sessile spikelets. Rhachis internode tip transverse, crateriform. Spikelets squeezed between internode and pedicel, in threes. Fertile spikelets sessile, 2 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, angular, pubescent.

Sterile Spikelets. Companion sterile spikelets 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, compressed strongly, 5.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base truncate, with central boss, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, indurate, 2-keeled, winged on keel, winged broadly, winged near apex. Lower glume primary vein tuberculate (muricate). Lower glume surface cancellate. Upper glume oblong, coriaceous, 2-keeled, 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, acute. Fertile lemma oblong, hyaline, without keel, 2 -veined, 0–3 -veined. Lemma margins ciliolate, hairy all along. Lemma apex acute. Palea absent or minute.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China. Myanmar.

Rehia nervata Fijten. *Blumea*, 22(3): 416 (1975).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Bulbulus nervatus* Swallen, *Phytologia* 11(3): 154 (1964). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: V: *J.R. Swallen 3552*, 18 Feb 1934–26 Feb 1934, Brazil: Maranhão: in high sandy forest from Caixas to Barra do Corda (US-1612746, US-1612746).

Illustrations (Books): E.J.Judziewicz et al, *American Bamboos* (1999) (313, Fig. 192), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig.93).

Derivation (Clifford & Bostock 2007): *L. nervus*, nerve; *-ata*, possessing. Spikelets with conspicuously nerved lemmas or glumes.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 12–19 cm long, swollen at the base, forming an elongated corm. Culm-internodes retrorsely scabrous. Culm-nodes pubescent. Leaves cauline. Leaf-sheaths retrorsely scabrous. Ligule an eciliate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades oblong, 2–4.5 cm long, 7–16 mm wide. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, embraced at base by subtending leaf. Axillary inflorescences similar to terminal. Racemes 1, single, 1–2 cm long, bearing few fertile spikelets, bearing 2–5 fertile spikelets on each. Sexes mixed. Spikelets in pairs. Fertile spikelets pedicelled, 1 in the cluster. Male spikelets pedicelled, 1 in a cluster. Pedicels present, filiform (male) or cuneate (female).

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, dorsally compressed, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, with lower wider than upper, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 7–8 mm long, 1.1 length of upper glume, chartaceous, without keels, 9 -veined. Lower glume apex acuminate. Upper glume ovate, 6–7 mm long, 1.2 length of adjacent fertile lemma, chartaceous, without keels, 7 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma elliptic, 5.5 mm long, indurate, without keel. Lemma surface pubescent. Lemma margins involute, covering most of palea. Lemma apex acute. Palea indurate.

Flower and Fruit. Lodicules 3. Anthers 3.

Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 5 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 5 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. French Guiana, Guyana, Surinam. Brazil Northeast, Brazil North.

Maranhão. Pará.

Reimarochloa aberrans (Doell) Chase. *Proc. Biol. Soc. Wash.* xxiv. 137 (1911).

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.

TYPE from Brazil. **Basionym or Replaced Name:** *Reimaria aberrans* Döll, *Fl. Bras.* 2(2): 38, pl. 13 (1877). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Spruce 851*, Brazil: Habitat prope Santarem provincia Paraensis (M). LT designated by Chase, *Proc. Biol. Soc. Wash.* 24: 137 (1911). ST: *Spruce 887*, Brazil: habitat prope Santarem provinciae Paraensis.

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (507, Fig 113), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig.94).

Derivation (Clifford & Bostock 2007): *L. aberro*, wander away. Unlike related species, the awn is scarcely exerted from spikelet.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 20–40 cm long, rooting from lower nodes. Culm-internodes elliptical in section. Culm-nodes pubescent. Leaf-sheaths pilose. Ligule a fringe of hairs. Leaf-blades 3–15 cm long, 3–6 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 6–15, borne along a central axis, spreading, unilateral, 2–7 cm long. Central inflorescence axis 2–10 cm long. Rhachis angular, 1.5 mm wide. Spikelet packing abaxial. 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, acute or acuminate, 5 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 5 -veined, glabrous, obtuse. Fertile lemma ovate, 5 mm long, cartilaginous, without keel. Lemma margins flat. Lemma apex acute or acuminate. Palea separating from lemma above, lanceolate, 2 -veined, without keels.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. French Guiana. Bolivia. Brazil North. Pará.

Reimarochloa acuta (Flugge) Hitchcock. *Contrib. U. S. Nat. Herb.* 12:198 (1909).

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.

TYPE from Venezuela. **Basionym or Replaced Name:** *Reimaria acuta* Flügge? *Gram. Monogr., Paspalum* 217 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Humboldt & Bonpland s.n.*, Venezuela: Río Orinoco (P-HUM, B; IT: US).

Recent Synonyms: *Reimarochloa brasiliensis* (Spreng.) Hitchc., *Contrib. U. S. Nat. Herb.* 12: 198 (1909).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 1, Aristidoideae a Pharoideae (2012) (445), S.A.Renvoize, *Gramineas de Bolivia* (1998) (507, Fig 113), S.A.Renvoize, *The Grasses of Bahia*, 1984 (105, Fig.37 as *Reimaria brasiliensis*), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (250, Fig. 204), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (475, Fig.170 as *Reimaria brasiliensis*), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig.94), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (57, Fig. 31 as *Reimaria brasiliensis*).

Illustrations (Journals): *Ruizia* (13:379, Fig 50e-f (1993) as *R. brasiliensis*).

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

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms 10–30 cm long. Culm-nodes bearded. Ligule a fringe of hairs. Leaf-blades 2–6 cm long, 2–3 mm wide.

Inflorescence. Inflorescence composed of racemes, shorter than basal leaves, embraced at base by subtending leaf. Racemes 5–9, digitate, unilateral, 1.5–4 cm long. Central inflorescence axis 0.5–2 cm long. Rhachis angular. Spikelet packing abaxial. 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, dorsally compressed, acute or acuminate, 1.5–6 mm long (shorter distally), falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 3 -veined, pilose, hairy below, hairy on veins, bearing hairs 0.5 mm long, obtuse. Fertile lemma lanceolate, 1.5–6 mm long, cartilaginous, without keel, 3 -veined, 0–3 -veined. Lemma margins flat. Lemma apex acute or acuminate. Palea separating from lemma above, lanceolate, 0.75 length of lemma, 2 -veined, without keels.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. El Salvador, Honduras. Cuba, Dominican Republic. Guyana, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast.

Para, Amapa, Mato Grosso, Bahia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe. Mato Grosso, Goiás, Mato Grosso do Sul. Bahia, Maranhão, Piauí, Rio Grande do Norte (RN). Amazonas, Pará, Tocantins. Minas Gerais. Formosa, Misiones.

Reimarochloa oligostachya (Munro) Hitchcock. *Contrib. U. S. Nat. Herb.* xii. 199 (1909).

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.

TYPE from USA. **Basionym or Replaced Name:** *Reimaria oligostachya* Munro ex Benth., *J. Linn. Soc., Bot.* 19: 34 (1881). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Curtiss 3566*, USA: Florida (US). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 199 (1908).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (601), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (192, Fig. 122).

Derivation (Clifford & Bostock 2007): Gk. *oligos*, few; *stachys*, ear of corn. Inflorescence with few branches.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 10–15 cm long. Culm-internodes elliptical in section. Culm-nodes glabrous. Ligule a fringe of hairs. Leaf-blades 3–5 cm long, 2–4 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–3, single or paired or digitate, spreading, unilateral, 2–3 cm long. Rhachis angular, 1.5–2 mm wide. Spikelet packing abaxial. 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, acute or acuminate, 5 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 7 -veined, glabrous, obtuse. Fertile lemma ovate, 5 mm long, cartilaginous, without keel. Lemma margins flat. Lemma apex acute or acuminate. Palea separating from lemma above, lanceolate, 2 -veined, without keels.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Southeastern USA, Mexico. Florida. Southeast Mexico. **Caribbean.** Cuba. Tabasco.

Reitzia smithii Swallen. *Sellowia*, No. 7, 8 (1956).

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.

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L.B. Smith & R. Reitz 6123*, Mar 1952, Brazil: Santa Catarina (US-2150190).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (188 & 190, Fig. 37 7 38), E.J.Judziewicz et al, *American Bamboos* (1999) (315, Fig. 193).

Derivation (Clifford & Bostock 2007): in honor of Lyman Bradford Smith (1904–1999) United States botanist.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths absent. Culms erect or decumbent, 15–30 cm long. Culm-nodes pubescent. Leaves cauline. Ligule an eciliate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 4–7.5 cm long, 12–20 mm wide. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence composed of racemes, embraced at base by subtending leaf. Racemes 1, single, 1–3 cm long. Sexes mixed. Spikelets in pairs. Fertile spikelets pedicelled, 1 in the cluster. Male spikelets sessile, 1 in a cluster. Pedicels present, cuneate, 1 mm long.

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, dorsally compressed, 6 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes deciduous, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume ovate, 6 mm long, 1.1 length of upper glume, coriaceous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume ovate, 5.5 mm long, 1.3 length of adjacent fertile lemma, coriaceous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma oblong, 4 mm long, cartilaginous, pallid or purple (mottled), shiny, without keel, 3 -veined, 0–3 -veined. Lemma margins involute, covering most of palea. Lemma apex acute. Palea cartilaginous, 2 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 3, 1 mm long.

Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 2.5–3 mm long. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast, Brazil South.

Sao Paulo Parana, Catarina, Rio Grande do Sul. Rio de Janeiro, Sao Paulo. Santa Catarina.

Relchela panicoides Steud. *Syn. Pl. Gram.* 101 (1854).

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 Grasses* (2006).

TYPE from Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: W. Lechler [*Hohenacker exsicata*] 435, Dec 1851, Chile: prope col. Arique et pr. Techa (P; IT: BRU, CGE, L, LE, US-1127141, US-90607 (fragm. ex P; fragm. ex CGE; fragm. ex LE), US-1761967). US-90607 has an excellent spikelet illustration by A. Chase. ST: *Lechler [Hohenacker exsic.] 435*, Nov 1853, Chile: in virgaltis prope Arique (US-1761967).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (352), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (304, Fig. 101), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (77, Fig 219).

Derivation (Clifford & Bostock 2007): Gk. *-oides*, resembling. Resembling *Panicum*, usually with respect to form of the inflorescence or spikelet.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms erect or decumbent, 20–100 cm long. Ligule an eciliate membrane, 2 mm long. Leaf-blades 6–20 cm long, 2–6 mm wide. Leaf-blade surface scabrous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 4–13 cm long. Primary panicle branches whorled at most nodes, bearing spikelets almost to the base. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear, scabrous.

Fertile Spikelets. Spikelets comprising 1–2 fertile florets, with a barren rhachilla extension or 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, 4–6.5(–7) mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets or definite, pubescent. Floret callus evident, pubescent, truncate.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3–4.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume ovate, 3–4.5 mm long, 1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–3.5 mm long, indurate, without keel, 5–7 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous. Lemma margins convolute, covering most of palea. Lemma apex obtuse. Palea 1 length of lemma, membranous, 2 -veined. Palea keels ciliate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.5–2.2 mm long. Ovary pubescent on apex. Caryopsis with adherent pericarp, ovoid, trigonous, sulcate on hilar side. Hilum linear, 0.33 length of caryopsis.

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, Valparaiso. Valparaiso, Maule, Biobio, La Araucania. Los Lagos.

Renvoizea acicularifolia (Renvoize & Zuloaga) Zuloaga & Morrone. *Systematic Botany* 33: 295 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum acicularifolium* Renvoize & Zuloaga, *Kew Bull.*, 50(1): 163 (1995). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Bahia: Mun. Rio de Contas: Pico de Almas, vertente leste, subida do pico do campo norte do Queiros, 13.32S 41.58W, 1600 m, afloramento de rocha conglomerada com campo pedregoso, *Harley, Giuliatti, Stannard & Hind 26321* (HT: SPF; IT: CEPEC).

Illustrations (Journals): *Systematic Botany* (33: 295, fig.8 (2008)).

Derivation (Clifford & Bostock 2007): *L. acus*, needle; *-ulus*, diminutive; *-aris*, pertaining; *folium*, leaf. Leaf blades pungent.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Butt sheaths purple, pilose or villous. Culms erect or geniculately ascending, 55–95 cm long, wiry. Leaves cauline. Leaf-sheaths viscid, without keel, pilose or hirsute. Ligule a fringe of hairs, 1–2 mm long. Leaf-blades involute, 10–20 cm long, 1–1.5 mm wide, coriaceous, stiff. Leaf-blade surface ribbed, grooved adaxially or abaxially, scabrous, glabrous or pilose. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong, 2–4.5 cm long, 0.7–1 cm wide. 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, 2.5–3.3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2–3 mm long, 0.75–0.9 length of spikelet, membranous, mid-green or purple, without keels, 3 -veined. Lower glume surface pilose. Lower glume apex acute. Upper glume ovate, 2.5–3 mm long, 1 length of spikelet, membranous, mid-green or purple, without keels, 5 -veined. Upper glume surface pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.5–3.5 mm long, 1 length of spikelet, membranous, 5 -veined, glabrous, acute. Fertile lemma elliptic, dorsally compressed, 1.5–2 mm long, indurate, shiny, 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.

Renvoizea durifolia (Renvoize & Zuloaga) Zuloaga & Morrone. *Systematic Botany* 33: 295 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum durifolium* Renvoize & Zuloaga, *Kew Bull.*, 50(1): 162 (1995). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Bahia: Mun. Rio de Contas: 11 km N da cidade, *Harley, Sales, Calvacante, Assis, Chukr & Pires 26053* (HT: SPF; IT: CEPEC).

Illustrations (Journals): *Systematic Botany* (33: 296, fig.9 (2008)).

Derivation (Clifford & Bostock 2007): *L. durus*, hard; *folium*, leaf. Leaf-blades tough.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths villous, with tawny hairs. Culms erect, 100 cm long, wiry. Culm-internodes solid. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 2 mm long. Leaf-blades straight or curved, involute, 55–70 cm long, 2 mm wide, coriaceous, stiff. Leaf-blade surface ribbed, grooved adaxially, scabrous, rough adaxially, glabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong, 8–10 cm long, 1 cm wide. 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 oblong, dorsally compressed, 5–6 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 5–6 mm long, 1 length of spikelet, membranous, mid-green or purple, without keels, 5 -veined. Lower glume surface pilose. Lower glume apex acute. Upper glume ovate, 5–6 mm long, 1 length of spikelet, membranous, mid-green or purple, without keels, 5 -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, 5 mm long, 1 length of spikelet, membranous, 5 -veined, pilose, acute. Palea of lower sterile floret pubescent, adorned on keels. Fertile lemma elliptic, dorsally compressed, 3.5 mm long, indurate, yellow, shiny, 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.

Renvoizea glaziovii (Hack.) Zuloaga & Morrone. *Systematic Botany* 33: 295 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum glaziovii* Hack., *Oesterr. Bot. Zeitschr.* 1901, 373. (1901). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: A.F.M. Glaziou 14386, 22 Nov 1882, Brazil: Rio de Janeiro: Morro du Carangola (K, US-974692 (fragm. ex W), US-1280030). ST: Glaziou 17398, Brazil: Rio de Janeiro (K, US).

Illustrations (Journals): *Systematic Botany* (33: 296, fig.10 (2008)).

Derivation (Clifford & Bostock 2007): in honor of Auguste François Marie Glaziou (fl. 1833–1906) French-born artist and Brazilian botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial. Culms erect, 80–100 cm long, 4–8 mm diam. Culm-internodes alternately elongated and bunched, solid, 5–7 cm long (when long), distally pilose. Lateral branches lacking. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs bearded. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, 40–70 cm long, 10 mm wide, stiff, glaucous. Leaf-blade venation distinct. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle. Panicle open, linear or oblong, dense, 10–20 cm long, 2–3 cm wide. Primary panicle branches 1-nate, profusely divided. Panicle axis pubescent. Panicle branches pilose. 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 ovate, dorsally compressed, obtuse, 4 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate or oblong, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume lateral veins obscure. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate or ovate, 1 length of spikelet, membranous, 5 -veined, obscurely veined, obtuse or acute. Fertile lemma elliptic, dorsally compressed, 3.5 mm long, indurate, pallid, shiny, 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.

Minas Gerais, Rio de Janeiro, Espirito Santo. Rio de Janeiro.

Renvoizea lagostachya (Renvoize & Zuloaga) Zuloaga & Morrone. *Systematic Botany* 33: 296 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum lagostachyum* Renvoize & Zuloaga, *Kew Bull.*, 39(1): 191 (1984). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Furlan et al. 2016, 7 Sep 1981, Brazil: Bahia: Mucug? Estrada Mucug?Guin? a 26 km de Mucug?(SPF; IT: K, US-3260302).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984.

Derivation (Clifford & Bostock 2007): Gk. *lagos*, hare; *stachys*, ear of corn. Inflorescence a spike-like panicle.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 100 cm long. Culm-internodes distally pubescent. Ligule a ciliate membrane. Leaf-blades flat or involute, 50 cm long, 5–7 mm wide. Leaf-blade surface glabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear or oblong, 7–10 cm long, 0.8–1.2 cm wide. 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, 4–4.5 mm long, falling entire. Floret callus evident.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, grey, without keels, 3 -veined. Lower glume surface pilose. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, grey, without keels, 5 -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, grey, 5 -veined, pilose, acute. Fertile lemma elliptic, dorsally compressed, 4–4.5 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 Northeast.
Bahia. Bahia.

Renvoizea marauense (Renvoize & Zuloaga) Zuloaga & Morrone. *Systematic Botany* 33: 296 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum marauense* Renvoize & Zuloaga, *Kew Bull.*, 39(1): 193 (1984). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Bahia: Municipio de Mara? 45 km E of Ubaitaba, 25–30 m, *Mori, Walther & Necker 12797* (HT: CEPEC).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (146, Fig.51).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Marau, Bahia State, Brazil.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial. Culms 70–180 cm long. Culm-internodes distally pubescent. Leaves without demarcation between sheath and blade. Ligule absent. Leaf-blades linear or lanceolate, flat or involute, 43–70 cm long, 12–22 mm wide. Leaf-blade surface glabrous. Leaf-blade margins serrulate. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or pyramidal, dense, 12–18 cm long, contracted about secondary branches. 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, 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, 2.3–3 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, 2.3–3 mm long, indurate, shiny, 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.

Renvoizea restingae (Renvoize & Zuloaga) Zuloaga & Morrone. *Systematic Botany* 33: 296 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum restingae* Renvoize & F. Zuloaga, *Kew Bull.*, 39(1): 191 (1984). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T.S. dos Santos & L.A. Mattos Silva* 3290, 13 Jul 1978, Brazil: Bahia: Mun. de Canavieiras: Rod. Canavieiras/Camacã (BA 270), a 22 km W de Canavieiras, mata secundária, perturbada por extratores de fibra de Piaçava (*Attalea funifera* Mart.), solo arenoso, planta herbácea. 2 m de alt., inflorescência em botões, verdes, folhas pilosas (CEPEC; IT: MO-3117727).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (146, Fig. 51).

Derivation (Clifford & Bostock 2007): Portuguese *restinga*, a sandy spit. Growing in restinga forests, so-called because they grow on sandy soils subject to flooding.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial. Culms erect, 100–200 cm long. Culm-internodes distally pilose. Leaf-sheaths pilose. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, flat or involute, 40–75 cm long, 15–20 mm wide. Leaf-blade surface pubescent, densely hairy, hairy adaxially. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, lanceolate, 17–20 cm long, 1–1.5 cm wide. 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 oblong, dorsally compressed, 4–4.5 mm long, falling entire. Rhachilla internodes elongated between glumes.

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, 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, 4–4.5 mm long, indurate, without keel. Lemma margins involute. Lemma apex rostrate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Bahia. Bahia.

Renvoizea sacciolepoides (Renvoize & Zuloaga) Zuloaga & Morrone. *Systematic Botany* 33: 296 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum sacciolepoides* Renvoize & F. Zuloaga, *Kew Bull.*, 39(1): 191 (1984). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Bahia: Belmonte-Itapebi, Brito & da Vinha 96 (HT: CEPEC).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (148, Fig. 52).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial. Basal innovations flabellate. Culms 60–150 cm long. Culm-internodes distally pubescent. Leaves without demarcation between sheath and blade. Leaf-sheaths keeled. Ligule a ciliate membrane. Leaf-blades filiform or linear, flat or involute, 30–75 cm long, 1.5–6 mm wide. Leaf-blade surface glabrous or puberulous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 4–15 cm long, 0.5–1 cm wide. 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 oblong or ovate, dorsally compressed, 3–3.5 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 acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -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 -veined, pilose, acute. Fertile lemma elliptic, dorsally compressed, 3–3.5 mm long, indurate, yellow or light brown, shiny, 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.

Renvoizea teretifolia (Hack.) Zuloaga & Morrone. *Systematic Botany* 33: 297 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum teretifolium* Hack., *Oesterr. Bot. Zeitschr.* 1901, 372. (1901). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: A.F.M. Glaziou 17957, 1889, Brazil: Rio de Janeiro: Petropolis (MO-1606683, US-1126955 (fragm. ex W), US-1160499). ILT: A.F.M. Glaziou 16622, 20 Jan 18–7, Brazil: Rio de Janeiro: Serra dos Orgãos (US-1645665, US-81292 (fragm. ex W)).

Illustrations (Journals): *Systematic Botany* (33: 297, fig.11 (2008)).

Derivation (Clifford & Bostock 2007): *L. teres*, narrow; *folium*, leaf. Leaf-blades narrow and generally rigid.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms erect, 40 cm long, 2 -noded. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths glabrous on surface or pilose. Ligule a ciliate membrane. Leaf-blades terete, 30–40 cm long, 1 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle. Panicle open, linear or oblong, dense, 10–16 cm long. Primary panicle branches appressed, 1 -nate. Panicle branches bearded in axils. 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 oblong or ovate, dorsally compressed, obtuse, 3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume lateral veins prominent. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma oblong, dorsally compressed, 3 mm long, indurate, yellow, shiny, 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.

Minas Gerais, Rio de Janeiro, Espirito Santo. Rio de Janeiro.

Renvoizea trinii (Kunth) Zuloaga & Morrone. *Systematic Botany* 33: 297 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum trinii* Kunth, *Enum. Pl.* i. 88. (1833). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.H. von Langsdorff s.n.*, Brazil (LE-TRIN-0927.01 (& figs.); IT: US-975811 (fragm. ex LE)).

Recent Synonyms: *Panicum rigidifolium* Trin, *Sp. Gram.* 2(18): , t. 214 (1829).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (144, Fi. 50).

Illustrations (Journals): *Systematic Botany* (33: 297, fig.12 (2008)).

Derivation (Clifford & Bostock 2007): in honor of Carl Bernhard Trinius (1778–1844) German-born Russian physician and agrostologist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous or pilose. Culms erect, 150–200 cm long. Ligule a fringe of hairs. Leaf-blades flat or convolute, 35–75 cm long, 6–15 mm wide, coriaceous, stiff. Leaf-blade surface pilose, hairy adaxially. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 14–20 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.

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, 4.5–5.5 mm long, falling entire. Floret callus evident, 0.5 mm long, winged, with lateral wings, truncate.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic, 0.66–1 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface glabrous or pilose. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or pilose. 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, obtuse. Fertile lemma oblong, dorsally compressed, 3.5–4 mm long, indurate, yellow, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast, Brazil Southeast.

Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo. Bahia. Espirito Santo, Minas Gerais, Rio de Janeiro.

Renvoizea vaginiviscosa (Renvoize & Zuloaga) Zuloaga & Morrone. *Systematic Botany* 33: 297 (2008).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum vaginiviscosum* Renvoize & F. Zuloaga, *Kew Bull.*, 50(1): 161 (1995). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Bahia: Mun. Rio de Contas, Pico de Almas, *Harley, Hind & Siñao* 25772 (HT: SPF; IT: CEPEC).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. vagina*, sheath; *viscosum*, sticky. Leaf- sheaths viscid.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Paspalinae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Butt sheaths coriaceous, purple, glabrous. Culms geniculately ascending, 90 cm long, wiry. Culm-internodes solid. Leaves basal and cauline. Leaf-sheaths wider than blade at the collar, viscid, glabrous on surface, outer margin hairy. Ligule a fringe of hairs, 3–5 mm long. Leaf-blades flat or involute, 30–35 cm long, 4 mm wide, coriaceous, stiff, light green. Leaf-blade surface ribbed, grooved adaxially, scabrous, rough adaxially, glabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong, 8–9 cm long, 1–1.3 cm wide. 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, 4–4.5 mm long, falling entire.

Glumes. Glumes shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 3–4 mm long, 0.75–1 length of spikelet, membranous, purple, without keels, 3 -veined. Lower glume surface pilose. Lower glume apex acute. Upper glume ovate, 4 mm long, 0.9–1 length of spikelet, membranous, purple, without keels, 5 -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, 4 mm long, 1 length of spikelet, membranous, 5 -veined, pilose, hairy above, acute. Palea of lower sterile floret pubescent, adorned on keels. Fertile lemma oblong, dorsally compressed, 2.5 mm long, indurate, yellow, shiny, 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.

Reynaudia filiformis (Spreng. ex Schult.) Kunth. *Rev. Gram.* 195. t. 9 (1830).

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.

TYPE from San Domingo. **Basionym or Replaced Name:** *Polypogon filiformis* Spreng. ex Schult., *Mantissa* 2: 182 (1824). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: Bertero [*Balbis misit. 1824*] no. 219, S. Domingo (B (Kunth hb, ex Sprengel hb); IT: US (fragm. ex B [Kunth hb])).

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

Derivation (Clifford & Bostock 2007): *L. filum*, thread; *forma*, shape. Leaf-blades narrow.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe Incertae Sedis.

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 15–40 cm long. Culm-nodes bearded. Leaves mostly basal. Ligule a ciliate membrane. Leaf-blades filiform, involute, 3–10 cm long, 1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or oblong, 3–6 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 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, laterally compressed, 3–4 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, firmer than fertile lemma. Lower glume oblong, 2–2.5 mm long, 0.66 length of spikelet, membranous, 1-keeled, 3 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins ribbed. Lower glume apex dentate, 2 -fid, awned, 1 -awned, awn 4–7 mm long. Upper glume oblong, 3–4 mm long, membranous, 1-keeled, 5 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins ribbed. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 5–9 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, 1-keeled, 3 -veined, dentate, 2 -fid, awned. Awn of lower sterile floret 1 mm long. Fertile lemma elliptic, 3 mm long, hyaline, keeled, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute. Palea absent or minute.

Flower and Fruit. Anthers 2. Caryopsis with adherent pericarp, oblong, laterally compressed.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba, Dominican Republic, Haiti, Jamaica.

Rheochloa scabriflora Filg., Peterson & Herrera. *Syst. Bot.* 24:123 (1999).

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.

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Filgueiras* 2854, 1 Apr 1994, Brazil: Goiás: Município de Mineiros: Parque Nacional de Emas, 18°7'55"S, 52°3'79"W, Campo Úmido (humid grassland), erva decumbendente (decumbent grass), colmos flexuosas

(culms flexuous), apoiandose em outras plantas (supported by other plants), inflorescência avermelhada (reddish inflorescence), rara (rare), apenas duas plantas vistas no meio da vegetação (only two plants seen in the vegetation), 1 Apr 1994 (IBGE; IT: MO-04575749 (fragm., photocopy), US).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. scaber*, rough; *flos*, flower. Spikelets with scabrous glumes and/or lemmas.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending or decumbent, 60–75 cm long, 15–18 -noded, rooting from lower nodes. Culm-internodes terete, thin-walled, distally glabrous. Lateral branches lacking. Leaf-sheaths 1.4–7.7 cm long, mostly shorter than adjacent culm internode, without keel, glabrous on surface. Ligule a ciliolate membrane, 0.6–1 mm long. Collar glabrous. Leaf-blades lanceolate or ovate, 1.8–2.6 cm long, 4–5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Peduncle 14–30 cm long, smooth, glabrous. Racemes 3–5, digitate, unilateral, 2.5–5.2 cm long. Rhachis angular, scaberulous on margins. Spikelet packing broadside to rhachis, contiguous. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5–1 mm long, scaberulous.

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 laterally compressed, 5.4–5.6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1.3–1.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 5.4–5.6 mm long, 1 length of upper glume, coriaceous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 5.2–5.3 mm long, 1.8–2.3 length of adjacent fertile lemma, coriaceous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.4–3 mm long, hyaline, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma apex obtuse, pubescent. Palea 2.3–3.8 mm long, 2 -veined. Apical sterile florets 1 in number, rudimentary.

Flower and Fruit. Lodicules 2, cuneate, 0.2–0.3 mm long, fleshy, truncate. Anthers 3, 1–1.2 mm long. Caryopsis with adherent pericarp, fusiform, isodiametric, trigonous, 2.7–2.8 mm long, apex bicornate. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central.
Goiás.

Rhipidocladum abregoense Londono & Clarke. *Novon* 8:419 (1998).

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 Grasses* (2006).

TYPE from Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Colombia: Norte de Santander: Mun. Abrego: km 20 via Abrego-Jurisdicciones, 1990 m, 18 Abr 1994, flowers, X. Londoño, E. Ascanio & S. Rodriguez 881 (HT: COL; IT: ISC, NY, TULV, US).

Illustrations (Journals): *Novon* (8: 421 Fig.5 (1998)).

Derivation (Clifford & Bostock 2007): *L. -ense*, denoting origin. From Abrego, Colombia.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 400–800 cm long, 1–3(–5) mm diam., woody. Culm-internodes terete, thick-walled, 50–75 cm long, mid-green and yellow, mottled, distally glabrous. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement many, flabellate. Culm-sheaths present, deciduous, 4–5 cm long, 1.5–4 times as long as wide, puberulous, glabrous on margins. Culm-sheath ligule 0.2 mm high. Culm-sheath blade linear, deciduous, erect, 1 cm long. Leaves (2–)8–15 per branch. Leaf-sheaths striately veined, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, curly, 4–5 mm long. Leaf-sheath auricles absent. 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 0.08–0.1 cm long, petiole pubescent.

Leaf-blades lanceolate, 8–35 cm long, 1.8–2.3 mm wide. Leaf-blade venation with 4–6 secondary veins. Leaf-blade surface glabrous or puberulous, sparsely hairy, hairy adaxially or abaxially or on both sides. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, paucilateral, 4.5–21 cm long, bearing 2–4(–5) fertile spikelets on each. Rhachis pubescent on surface. Rhachis internodes 10–26 mm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.5 mm long, pubescent.

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, 33–60 mm long, 2–3 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 5–7 mm long.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 4.5–6 mm long, 0.66 length of upper glume. Lower glume surface pubescent. Lower glume margins ciliate. Lower glume apex acute, awned, 1 -awned, awn 1–1.5 mm long. Upper glume lanceolate, 7–9 mm long, 0.15–0.2 length of adjacent fertile lemma, chartaceous, without keels, 7 -veined. Upper glume surface pubescent. Upper glume margins ciliate. Upper glume apex acute, awned, 1 -awned, awn 2–3 mm long.

Florets. Fertile lemma lanceolate, 12–18 mm long, 2–2.2 mm wide, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins ciliate, hairy above. Lemma apex acute, awned, 1 -awned. Principal lemma awn 4–8 mm long overall. Palea 7.2–9 mm long, 4 -veined. Palea keels ciliate, adorned above, with 0.66 of their length adorned. Palea surface puberulous, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, ovate, 0.8–1.5 mm long, membranous, veined, ciliate. Anthers 3, 3.8–4.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.

Rhipidocladum ampliflorum (McClure) McClure. *Smithsonian Contrib. Bot.*, 9: 105 (1973).

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 Grasses* (2006).

TYPE from Venezuela. **Basionym or Replaced Name:** *Arthrostylidium ampliflorum* McClure, *J. Wash. Acad. Sci.* 32(6): 167, f. 1 (1942). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H. Karsten s.n.*, no date, Venezuela (US-1126694).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. amplius*, large; *flos*, flower. Spikelets large.

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, deciduous. Leaf-sheaths striately veined, glabrous on surface. Leaf-sheath oral hairs setose, 10–20 mm long. Ligule absent. Leaf-blade base cuneate, with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long, petiole pubescent. Leaf-blades lanceolate, 6–13 cm long, 6–13 mm wide. Leaf-blade venation with 8–10 secondary veins, without cross veins or with obscure cross veins. Leaf-blade surface scaberulous, rough abaxially, glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, paucilateral, 5–10 cm long, bearing 7–9 fertile spikelets on each. Spikelet packing broadside to rhachis. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1 mm long.

Fertile Spikelets. Spikelets comprising 0–1 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 oblong, laterally compressed, 30–40 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes clavate, 5–7 mm long, eventually visible between lemmas.

Glumes. Glumes persistent, shorter than spikelet. Lower glume elliptic, 2.5–3.5 mm long, chartaceous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous to pubescent.

Lower glume apex acute, awned, 1 -awned, awn 2.5–3.5 mm long. Upper glume lanceolate, 7–8 mm long, 1-keeled, 5–7 -veined. Upper glume surface glabrous to pubescent. Upper glume apex acute, awned, 1 -awned, awn 2.5–4 mm long.

Florets. Basal sterile florets absent or 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate, 15–19 mm long, chartaceous, without keel, 13–15 -veined, more than 3-veined. Lemma midvein ciliate, hairy above. Lemma surface scabrous. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 7–9 mm long overall. Palea 1 length of lemma, 10–12 -veined. Palea keels ciliate. Palea surface puberulous, hairy on back. Palea apex obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, 4–5 mm long, veined. Anthers 3, 8–10 mm long. Stigmas 2. Ovary umbonate, glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America. Venezuela.

Rhipidocladum angustiflorum (Stapf) McClure. *Smithsonian Contrib. Bot.*, 9: 105 (1973).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

Basionym or Replaced Name: *Arthrostylidium angustiflorum* Stapf, *Bull. Misc. Inform. Kew* 1913: 268 (1913). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Anonymous s.n.*, no date, Tropical America (US-2808821).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. angustus*, narrow; *flos*, flower. Spikelets terete.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Butt sheaths absent. Culms woody. Culm-internodes terete. Lateral branches dendroid. Branch complement many. Culm-sheaths present. Leaves 3–4 per branch. Leaf-sheaths pubescent. Leaf-sheath oral hairs setose, 2–2.5 mm long. Ligule a ciliate membrane, truncate. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear, 5–8 cm long, 4.5–5 mm wide. Leaf-blade venation with 30–35 secondary veins, without cross veins. Leaf-blade surface puberulous, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, bilateral, 1.2–2 cm long. Rhachis puberulous on surface. Rhachis internodes 3–5 mm long. 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 or lanceolate, subterete, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3–3.5 mm long.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 1 mm long, 0.2 length of upper glume, 4 -veined. Upper glume linear or lanceolate, 5 mm long, 0.75 length of adjacent fertile lemma, chartaceous, without keels, 5 -veined. Upper glume apex setaceously acuminate.

Florets. Fertile lemma lanceolate, 6–8 mm long, coriaceous, purple, without keel, 7 -veined, more than 3-veined. Lemma apex acute, awned, 1 -awned. Principal lemma awn 2–4 mm long overall. Palea 6–8 mm long. Palea keels ciliate. Palea apex ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, ciliate. Anthers 3, 5 mm long, pallid. Stigmas 2. Styles 0 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America, Western South America. Cuba. Colombia.

Rhipidocladum bartlettii (McClure) McClure. *Smithsonian Contrib. Bot.*, 9: 105 (1973).

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 Grasses* (2006).

TYPE from Guatemala. **Basionym or Replaced Name:** *Arthrostylidium bartlettii* McClure, *Phytologia* 5(1): 81 (1954). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT:

H.H. Bartlett 12154, 20 Mar 1931, Guatemala: Petén: jungle, near dry arroyo, Uaxactun (US-1503623, US-1503624 (xerox, MO), US-1503625; IT: BM, ISC, MU-88751 (xerox, MO)).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Harley Hamis Bartlett (1886–1960) United States botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms arching, 200–1000 cm long, 2–8 mm diam., woody. Culm-internodes terete, thin-walled. Lateral branches dendroid. Branch complement many, flabellate, with subequal branches, thinner than stem. Culm-sheaths present. Leaf-sheaths glabrous on surface or puberulous. Leaf-sheath oral hairs setose, 3–6 mm long. Leaf-sheath auricles erect, 0.4–0.8 mm long. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, linear, 6–15 cm long, 2–11 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 5–16 cm long, bearing 6–18 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 oblanceolate, laterally compressed, 16–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume subulate, 2.5–3 mm long. Upper glume ovate, 3–5 mm long, chartaceous, without keels. Upper glume apex acute, muticous.

Florets. Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, ovate, 5–6 mm long, chartaceous, acuminate, muticous or awned. Awn of lower sterile floret 1 mm long. Fertile lemma ovate, 8–10 mm long, coriaceous, without keel, 5–9 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex acute, muticous. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, membranous. Anthers 3, 5 mm long. Stigmas 2.

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

Country /Province /State. **Mexico.** Southeast Mexico. **Mesoamerica.** Belize, Guatemala. Campeche, Chiapas, Quintana Roo, Yucatan.

Rhipidocladum clarkiae R.W. Pohl. *Ann. Missouri Bot. Gard.*, 72(2): 272 (1985).

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 Grasses* (2006).

TYPE from Costa Rica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R.W. Pohl & L.G. Clark 14103*, 26 Jul 1982, Costa Rica: San Jos? Parque Nacional Braulio Cerrillo, 1.6 km S of Bajo de Hondura, elev. 1350 m, 10°4'N, 83°9'W, steep hillside west of road, in broadleaf forest, very wet. Dense clump, 10–20 culms, 1 cm X 10 m measured, culms arching and drooping, internodes hollow, fragile, 28+ per culm (ISC; IT: CR-91091, CR-116850, F, K, MEXU, MO-3304819, US-3149518).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Lynn Gail Clark (1956–) United States botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms arching, 1000–1200 cm long, woody. Culm-internodes terete, thin-walled. Lateral branches dendroid. Branch complement many, flabellate, with subequal branches, thinner than stem. Culm-sheaths present. Leaf-sheaths glabrous on surface or puberulous. Leaf-sheath oral hairs setose, 3–6 mm long. Leaf-sheath auricles erect, 0.4–0.7 mm long. Ligule an eciliate membrane, 0.4–0.7 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 3–9 cm long, 4–9 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 9–13 cm long, bearing 7–8 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 oblanceolate, laterally compressed, 15–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume subulate, 2.5–4.5 mm long. Upper glume ovate, 4.9–6.7 mm long, chartaceous, without keels. Upper glume apex acuminate, awned, 1 -awned, awn 3 mm long.

Florets. Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, ovate, 4–5 mm long, chartaceous, acuminate, awned. Awn of lower sterile floret 2–4.5 mm long. Fertile lemma ovate, 7–9 mm long, coriaceous, without keel, 5–9 -veined, more than 3-veined. Lemma surface scabrous. Lemma apex acute, awned, 1 -awned. Principal lemma awn 4–6 mm long overall. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, membranous. Anthers 3, 4.5 mm long. Stigmas 2.

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

Country /Province /State. Mesoamerica. Costa Rica.

Rhipidocladum geminatum (McClure) McClure. *Smithsonian Contrib. Bot.*, 9: 105 (1973).

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 Grasses* (2006).

TYPE from Venezuela. **Basionym or Replaced Name:** *Arthrostylidium geminatum* McClure, *J. Wash. Acad. Sci.* 32(6): 169, f. 2 (1942). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Jahn 11, 20 Dec 1910, Venezuela: Trujillo (VEN; IT: US-602204).

Illustrations (Books): E.J.Judziewicz et al, *American Bamboos* (1999) (24, Fig. 8).

Images: E.J.Judziewicz, E.J., *American Bamboos* (1999);.

Derivation (Clifford & Bostock 2007): *L. gemini*, twins; -ata, possessing. Inflorescence of paired branches.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 20–25 mm diam., woody. Culm-internodes terete, thick-walled, distally glabrous. 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, persistent. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs scanty or ciliate, 2–3 mm long. Ligule absent. Leaf-blade base cuneate, with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long, petiole glabrous. Leaf-blades persistent, lanceolate, 5–9 cm long, 5–9 mm wide. Leaf-blade venation without cross veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, comprising 18 fertile spikelets. Panicle linear, 10.5 cm long. Primary panicle branches indistinct the panicle almost racemose. Spikelets in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 0–1 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 oblong, laterally compressed, 15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes clavate, 3 mm long, eventually visible between lemmas.

Glumes. Glumes persistent, shorter than spikelet. Lower glume oblong or ovate, 1.5–4 mm long, chartaceous, without keels or 1-keeled, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume inner surface pubescent. Lower glume apex obtuse to acuminate, muticous. Upper glume oblong or ovate, 2.5–4 mm long, 1-keeled, 3 -veined. Upper glume inner surface pubescent. Upper glume apex obtuse, muticous.

Florets. Basal sterile florets absent or 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma lanceolate, 7 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous, inner surface pubescent. Lemma apex acute, muticous. Palea 1 length of lemma. Palea keels scabrous. Palea surface scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 1 mm long. Anthers 3, 3.5 mm long. Stigmas 2. Ovary umbonate, glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America. Venezuela. Colombia.

Rhipidocladium harmonicum (Parodi) McClure. *Smithsonian Contrib. Bot.*, 9: 105 (1973).

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 Grasses* (2006).

TYPE from Peru. **Basionym or Replaced Name:** *Arthrostylidium harmonicum* Parodi, *Physis* (Buenos Aires) 19: 479, f. 1 (1944). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: C. Vargas Calderón 3260, Mar 1943, Peru: Cuzco (BAA; IT: US-1878633).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (36, Fig 4), E.J.Judziwicz et al, *American Bamboos* (1999) (191, Fig. 94).

Illustrations (Journals): *Smithsonian Contributions to Botany* (9: 103, Fig. 42 (1973)), *Ruizia* (13:35, Fig.2a-c (1993)).

Derivation (Clifford & Bostock 2007): Gk. *harmonia*, a skilfull blending of sounds; *-ike*, belonging to. Flutes are made from the internodes.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped loosely. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect or arching, 1000–2000 cm long, 20 mm diam., woody. Culm-internodes terete, thin-walled, 35 cm long, mid-green, distally glabrous. Lateral branches dendroid. Branch complement many, flabellate. Culm-sheaths present, hispid, with appressed hairs. Culm-sheath ligule 1 mm high. Culm-sheath blade lanceolate, erect, 3–7 cm long, attenuate. Leaves 5–6 per branch. Leaf-sheath oral hairs setose, 8 mm long. Leaf-sheath auricles erect. Ligule a ciliolate membrane, 1 mm long. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long, petiole glabrous or pubescent. Leaf-blades ovate, 8–13 cm long, 13–16 mm wide, glaucous. Leaf-blade surface scaberulous, glabrous, hairless except near base (where woolly tuft beneath).

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, sinuous, bilateral, 4–6 cm long, bearing few fertile spikelets, bearing 4–6 fertile spikelets on each. Spikelets 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 oblanceolate, laterally compressed, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two or several, 2–3 empty glumes, persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.5–4 mm long, 3 -veined. Lower glume apex acute. Upper glume ovate, 7–8 mm long, chartaceous, without keels, 7 -veined. Upper glume apex obtuse or 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, 7.5–9 mm long, chartaceous, 7 -veined, obtuse or acute. Fertile lemma ovate, 11 mm long, coriaceous, without keel, 9–11 -veined, more than 3-veined. Lemma apex acute. Palea keels ciliolate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, lanceolate, membranous. Anthers 3, 6–6.5 mm long. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Southeast Mexico. Mesoamerica, Western South America. Guatemala. Bolivia, Colombia, Ecuador, Peru.

Chiapas.

Rhipidocladium longispiculatum X. Londono & L.G. Clark. *Amer. J. Bot.*, 78(9): 1272 (1991).

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 Grasses* (2006).

TYPE from Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Ximena Londoño* 429, 14 Mar 1989, Colombia: Cundinamarca: Mun. Cabera: vereda Nuñez, Hda. Pto. Nuñez, vertiente W del Páramo de Sumapaz, elev. 2490–2500 m, 3°4'N, 74°1'W, babu leñoso, forma grandes poblaciones en la selva Andina y crece asociado con *Clusias*, *miconias*, *Neurolepis*, y palmas (*Geonoma* y *Ceraxylum*) (COL; IT: ISC, K, MO-3824827, MO-3824828, TULV, US-3187647, US-3187646, US-3134474, US-3134475).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. longus*, long; *spica*, thorn; *-ula*, diminutive; *-atum*, possessing.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, inclined at the tip, 800–1500 cm long, 40–60 mm diam., woody. Culm-internodes alternately elongated and bunched, terete, 90–120 cm long, distally glabrous. Lateral branches dendroid, intravaginal, arising from mid culm and upper culm. Branch complement in a clump, subtended by a bare patch above the node, with subequal branches. Culm-sheaths present, 10–18 cm long, 1.2–1.7 times as long as wide, glabrous, auriculate, with 3–4 mm high auricles, setose on shoulders, shoulders with curved hairs, shoulders with 2–3 mm long hairs. Culm-sheath ligule 0.8–1 mm high, fimbriate. Culm-sheath blade ovate, 7–15 cm long, 30–70 mm wide, pubescent and with ciliate margins. Leaves 5–7 per branch. Leaf-sheaths without keel, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, curly, 10–13 mm long. Ligule absent. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.4–0.6 cm long, petiole pubescent. Leaf-blades linear, 10.5–19 cm long, 4–12 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, 13–25(–40) cm long, bearing (9–)15–20(–25) fertile spikelets on each. Rhachis semiterete, glabrous on surface, scabrous on margins. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 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, (50–)80–100(–120) mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes clavate, 5–9 mm long, glabrous.

Glumes. Glumes several, 3 empty glumes, persistent, shorter than spikelet. Lower glume linear, 4–7 mm long, chartaceous, 1 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 4–8 mm long, 5–7 -veined. Upper glume margins eciliate or ciliate. Upper glume mucronate.

Florets. Basal sterile florets 1, barren, with palea or without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, lanceolate, 6–9 mm long, 5 -veined, ciliate on margins, mucronate. Fertile lemma ovate, narrowly proportioned, 16–18 mm long, 4–6 mm wide, chartaceous, shiny, without keel, 13–17 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex acute, mucronate. Palea 6–11 mm long, 0.5 length of lemma, 2-keeled. Palea keels ciliate. Palea surface glabrous or puberulous, hairy on back, hairy above. Palea apex dentate, 2 -fid, ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 3–4 mm long, veined, ciliate. Anthers 3, 5–7 mm long, purple. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.

Rhipidocladium martinezii G. Davidse & R.W. Pohl. *Novon*, 2(2): 90 (1992).

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 Grasses* (2006).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mexico: Chiapas: Mun. Unión Juárez: en el volcán Tacaná a 5 km al S de Talquián, 1550–1700 m, bosque mesófilo de montaña, arbusto voluble, flor amarilla con estambres morados y fruto, 8 Feb. 1987., *E. Martínez S., A. Márquez, G. Urquijo & M. Ramírez* 19767 (HT: MO; IT: MEXU).

Illustrations (Journals): *Novon* (2: 91, Fig. 4 (1992)).

Derivation (Clifford & Bostock 2007): in honor of Esteban Martínez (fl. 1987–1992), Mexican botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms geniculately ascending, 8–16 mm diam., woody. Culm-internodes terete, thin-walled, distally glabrous. Lateral branches dendroid. Branch complement many, flabellate. Culm-sheaths present. Leaves 2–5 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate, 1.5–2.5 mm long. Ligule a ciliate membrane, 0.1–0.3 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.13 cm long, petiole glabrous. Leaf-blades linear or lanceolate, 4–8 cm long, 2.5–3.5 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins smooth or scaberulous.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Axillary inflorescences compact (about culm node). Peduncle pubescent above. Racemes 1, single, unilateral, 2–4 cm long, bearing few fertile spikelets, bearing 2–4 fertile spikelets on each. Rhachis glabrous on surface. Spikelet packing distant. Spikelets appressed, 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, 25–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2.7–4.5 mm long, glabrous.

Glumes. Glumes one the lower absent or obscure or two, persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.5–4 mm long, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, awned, 1 -awned, awn 2–3 mm long. Upper glume lanceolate, 3.5–7.5 mm long, chartaceous, when present without keels, 5–7 -veined. Upper glume apex acuminate, awned, 1 -awned, awn 2.5–3.5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate, 9–11 mm long, chartaceous, 7–9 -veined, scaberulous, rough above, acuminate, awned. Awn of lower sterile floret 3–5 mm long. Fertile lemma lanceolate, 11–13 mm long, coriaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface scaberulous, rough below. Lemma apex attenuate, awned, 1 -awned. Principal lemma awn 3–6 mm long overall. Palea 9.5–10 mm long, 4–6 -veined. Palea keels ciliate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, lanceolate, 2 mm long, membranous, ciliate. Anthers 3, 6–7 mm long. Stigmas 2. Caryopsis with adherent pericarp, 5.5–6.1 mm long, dark brown. Embryo 0.2 length of caryopsis. Hilum linear, 1 length of caryopsis.

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

Country /Province /State. Mexico. Southeast Mexico.

Chiapas.

Rhipidocladum maxonii (Hitchcock) McClure. *Smithsonian Contrib. Bot.*, 9. 105 (1973).

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 Grasses* (2006).

TYPE from Costa Rica. **Basionym or Replaced Name:** *Arthrostylidium maxonii* Hitchc., *Proc. Biol. Soc. Wash.* 40: 80 (1927). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Collected just inside thick wet forest on steep slope at Santa Clara de Cartago, Costa Rica, alt. 1950 m, 20 July 1923, *William R. Maxon* 8154 (HT: US-1180144, US-1180145, US-1215531).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (503, Fig 190).

Derivation (Clifford & Bostock 2007): in honor of William Ralph Maxon (1877–1948) United States botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, culms solitary or caespitose. Rhizomes short, pachymorph, scaly. Butt sheaths absent. Culms arching or rambling, 1000–3000 cm long, 15–25 mm diam., woody. Culm-internodes terete, thin-walled, 10–18 cm long, distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches dendroid. Branch complement many, flabellate. Culm-sheaths present. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs setose, 6–8 mm long. Ligule a ciliolate membrane, 0.1–0.2 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1 cm long, petiole pubescent. Leaf-blades linear, 2–4 cm long, 2.5–4 mm wide, light green. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 0.8–1 cm long, bearing few fertile spikelets. Rhachis flattened. Spikelet packing crowded, 2-rowed. Spikelets spreading, 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 oblanceolate, laterally compressed, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below basal sterile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1.2–1.5 mm long, 1-veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 2–2.7 mm long, chartaceous, without keels. 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, ovate, 3.5–4.2 mm long, chartaceous, 4–5-veined, acute. Fertile lemma ovate, 5–6.4 mm long, coriaceous, without keel, 7–9-veined, more than 3-veined. Lemma apex acute. Palea keels ciliolate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, membranous. Anthers 3, 4.2 mm long, yellow. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America. Costa Rica. Guyana.

Rhipidocladum neumannii A.A.Sulekic, Z.E.RugolodeAgrasar & L.G.Clar. *Darwiniana*, 37: 317 (1999).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina: Salta: Dpto. Orán: Finca Arrazayal, ca. 20 km al NW de Agua Blanca, 600–700 m, 23 Mar 1988, flowers, Nuñez, Neumann & Sulekic 417 (HT: SI).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 1, Aristidoideae a Pharoideae (2012) (66, 67).

Illustrations (Journals): *Darwiniana* (37: 318, Fig.1, 319, Fig.2 (1999)).

Derivation (Clifford & Bostock 2007): In honor of Roberto Neumann (fl. 1988) Argentinian agronomist and botanical collector.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, pendulous at the tip, 400–1200 cm long, 10–28 mm diam., woody. Culm-internodes terete, thin-walled. Lateral branches dendroid. Bud complement 1. Branch complement many, flabellate. Culm-sheaths present, deciduous, 8–13 cm long, 2 times as long as wide, chartaceous, glabrous. Culm-sheath ligule 1 mm high, ciliolate. Culm-sheath blade triangular, erect, 4–12 cm long, 25–50 mm wide, acuminate. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane, 0.5–0.7 mm long, truncate. 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 lanceolate, 2.5–9.5 cm long, 6–11 mm wide. Leaf-blade venation without cross veins. Leaf-blade surface pubescent, hairy abaxially.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, unilateral, 2.5–6 cm long, 5–10 mm wide, bearing 3–10 fertile spikelets on each. 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 lanceolate, laterally compressed, 15–20 mm long, 2.5–4 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes glabrous. Floret callus glabrous.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2.5–7.5 mm long, chartaceous, 3–5 -veined. Lower glume lateral veins prominent. Lower glume surface scabrous, rough on veins. Lower glume margins ciliolate. Lower glume apex acute, mucronate. Upper glume lanceolate, 3.5–8 mm long, chartaceous, without keels, 7 -veined. Upper glume lateral veins prominent. Upper glume surface scabrous, rough on veins. Upper glume margins ciliolate. Upper glume apex acuminate, awned, 1 -awned, awn 1–1.5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate, 8–12 mm long, chartaceous, 9–11 -veined, glabrous, ciliolate on margins, fringed above, acute, awned. Awn of lower sterile floret 1.2–3 mm long. Fertile lemma ovate, 9–12 mm long, coriaceous, without keel, 5–7 -veined, more than 3-veined. Lemma apex acuminate. Palea 8.5–9.8 mm long, 6–8 -veined. Palea keels winged, narrowly winged, ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 2–2.4 mm long, membranous, veinless. Anthers 3, 5.5–6 mm long, pallid. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina Northwest.

Salta, Tucuman.

Rhipidocladum pacuarens R.W. Pohl. *Ann. Missouri Bot. Gard.*, 72(2): 273 (1985).

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 Grasses* (2006).

TYPE from Costa Rica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: R.W. Pohl 14161, 1 Oct 1982, Costa Rica: Cartago: 1.8 km E of Río Pacuara crossing of Hwy. 232, 750 m, 9°25'N, 83°4'W, top of hill, north side of road, plants blooming, climbing in trees, measured culm 7 m long, but others longer. Same colony as Pohl 13182 (ISC; IT: CR-116852, CR-91080, F, K, MO-3304809, US-2978119).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Rio Pacuare, Costa Rica.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms arching, 1000–1200 cm long, 20–30 mm diam., woody. Culm-internodes terete, thin-walled. Lateral branches dendroid. Branch complement many, flabellate, with subequal branches, thinner than stem. Culm-sheaths present. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs setose, 5–10 mm long. Leaf-sheath auricles erect, 0.2–0.4 mm long. Ligule an eciliate membrane, 0.2–0.4 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 7–12 cm long, 10–22 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 9–17 cm long, bearing 22–25 fertile spikelets on each. Spikelets 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 oblanceolate, laterally compressed, 18–19 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume subulate, 5.5–8.5 mm long. Upper glume ovate, 4.5–6 mm long, chartaceous, without keels. Upper glume apex acuminate, awned, 1 -awned, awn 4 mm long.

Florets. Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, ovate, 7–8 mm long, chartaceous, acuminate, awned. Awn of

lower sterile floret 2.5–3.5 mm long. Fertile lemma ovate, 7–8 mm long, coriaceous, without keel, 5–9 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex acute, awned, 1 -awned. Principal lemma awn 3–4 mm long overall. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, membranous. Anthers 3, 2–3 mm long. Stigmas 2.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Costa Rica, Nicaragua.

Rhipidocladum panamense R.W. Pohl. *Ann. Missouri Bot. Gard.*, 72(2): 275 (1985).

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 Grasses* (2006).

TYPE from Panama. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Gentry & J. Dwyer 3418, 1 Jan 1972, Panama: Panama: 1–2 mi beyond Goofy Lake, grass, clambering bambusoid (ISC; IT: MO-2199488, US).

Illustrations: None found.

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms arching, 500 cm long, 6–8 mm diam., woody. Culm-internodes terete, thin-walled. Lateral branches dendroid. Branch complement many, flabellate, with subequal branches, thinner than stem. Culm-sheaths present. Leaf-sheaths glabrous on surface or puberulous. Leaf-sheath oral hairs lacking or setose, 3–5.5 mm long. Leaf-sheath auricles erect, 0.2 mm long. Ligule an eciliate membrane, 0.1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, linear, 3–6 cm long, 2–3 mm wide. Leaf-blade surface glabrous or puberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 4–12 cm long, bearing 5–7 fertile spikelets on each. Spikelet packing lax. 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 oblanceolate, laterally compressed, 12–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume subulate, 2.5–3.5 mm long. Upper glume ovate, 4–7 mm long, chartaceous, without keels. Upper glume apex acuminate, awned, 1 -awned, awn 3.5–4.5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, ovate, 5.5 mm long, chartaceous, acuminate, awned. Awn of lower sterile floret 3–4.5 mm long. Fertile lemma ovate, 5.5–6 mm long, coriaceous, without keel, 5–9 -veined, more than 3-veined. Lemma surface hispidulous, hairy above. Lemma margins ciliolate. Lemma apex acute, awned, 1 -awned. Principal lemma awn 3–6 mm long overall. Palea 1 length of lemma. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, membranous. Anthers 3. Stigmas 2.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Panama.

Rhipidocladum parviflorum (Trinius) McClure. *Smithsonian Contr. Bot.*, 9: 105 (1973).

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 Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Arundinaria parviflora* Trin., *Mem. Acad. Imp. Sci. Saint-Petersbourg, Ser. 6, Sci. Math., Seconde Pt. Sci. Nat.* 3,1(6): 619 (1835). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L. Riedel* 189, no date, Brazil (LE; IT: MO-3051858, MO-1639044, US-2809009).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. parvus*, small; *flos*, flower. Spikelets small or with few florets.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms woody. Culm-internodes terete. Lateral branches dendroid. Branch complement many, flabellate. Culm-sheaths present. Leaves 3–4 per branch. Leaf-sheaths pubescent, outer margin hairy. Leaf-sheath oral hairs ciliate, 2–2.5 mm long. Ligule a ciliolate membrane, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades linear, 5–8 cm long, 4.5–5 mm wide. Leaf-blade venation with 30–35 secondary veins, without cross veins. Leaf-blade surface puberulous, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, arcuate, unilateral, 1.2–2 cm long, bearing few fertile spikelets. Rhachis pubescent on surface. Rhachis internodes 3–5 mm long. Spikelets appressed, solitary. Fertile spikelets sessile.

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 or lanceolate, laterally compressed, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 3.5 mm long, pubescent, hairy at tip.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume subulate, 4 mm long, 1 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 5 mm long, chartaceous, without keels, 5 -veined. Upper glume margins eciliate or ciliolate (above). Upper glume awned, 1 -awned.

Florets. Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma. Fertile lemma ovate, 6–8 mm long, coriaceous, purple, without keel, 7 -veined, more than 3-veined. Lemma margins eciliate or ciliolate, hairy above. Lemma apex awned, 1 -awned. Principal lemma awn 2–4 mm long overall. Palea linear or oblong, 6–8 mm long. Palea keels ciliolate, adorned above. Palea apex ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, membranous, ciliate. Anthers 3, 5 mm long. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, and Brazil. Venezuela. Colombia, Peru. Brazil Southeast, Brazil North, Brazil South.

Roraima, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Distrito Federal, Goiás. Acre, Amapa, Amazonas, Pará, Roraima, Rondonia, Tocantins. Minas Gerais. Paraná, Rio Grande do Sul, Santa Catarina.

Rhipidocladum pittieri (Hack.) McClure. *Smithsonian Contrib. Bot.*, 9: 105 (1973).

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 Grasses* (2006).

TYPE from Costa Rica. **Basionym or Replaced Name:** *Arthrostylidium pittieri* Hack., *Oesterr. Bot. Z.* 53(2): 75 (1903). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Tonduz (Pittier)* 7193, 26 Nov 1892, Costa Rica: Río Virilla (W; IT: CR, ISC, US-471703, US-471702, US-2808829).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (505, Fig 191).

Derivation (Clifford & Bostock 2007): in honor of Henry Francois de Fabrega Pittier (1857–1950) Swiss botanist and civil engineer.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms geniculately ascending, 500–1000 cm long, 5–10 mm diam., woody. Culm-internodes terete, thin-walled. Lateral branches dendroid. Branch complement many, flabellate, with subequal branches, thinner than stem. Culm-sheaths present, purple, hairy on margins. Culm-sheath ligule 0.5 mm high. Culm-sheath blade triangular, as wide as sheath at base, erect, hispid. Leaf-sheath oral hairs

lacking. Leaf-sheath auricles erect. Ligule an eciliate membrane, 1.5–2.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 7–12 cm long, 6–16 mm wide. Leaf-blade midrib indistinct. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 3–10 cm long. Spikelet packing regular, 2-rowed. Spikelets 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 fertile or the upper sterile. Spikelets oblanceolate, laterally compressed, 18–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret (lowest).

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume subulate, 2.5–4.5 mm long, 0.5–0.7 length of upper glume. Upper glume ovate, 4.9–6.7 mm long, 0.5 length of adjacent fertile lemma, chartaceous, without keels, 5-veined. 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, ovate, 6.5–7.9 mm long, 0.6–0.8 length of fertile lemma, chartaceous, 7–9-veined, acuminate, mucicous or mucronate or awned. Awn of lower sterile floret 0–2 mm long. Fertile lemma ovate, 10–11 mm long, coriaceous, without keel, 7-veined, more than 3-veined. Lemma margins ciliate, hairy above. Lemma apex acuminate, awned, 1-awned. Principal lemma awn 1–2 mm long overall, limb scaberulous. Palea 1 length of lemma, 4–6-veined. Palea keels ciliate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, membranous. Anthers 3. Stigmas 2. Ovary umbonate. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. **Mesoamerica.** Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama.

Michoacan. Chiapas.

Rhipidocladum prestoei (Munro) McClure. *Smithsonian Contrib. Bot.*, 9: 106 (1973).

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 Grasses* (2006).

TYPE from West Indies. **Basionym or Replaced Name:** *Arthrostylidium prestoei* Munro, *Bull. Misc. Inform. Kew* 1895: 186 (1895). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *H. Presto Herb.* 1675, no date, Trinidad and Tobago: Trinidad I. (US-2808833).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Henry Prestoe sometime Director of Botanic Gardens, Trinidad.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms arching or leaning, woody. Culm-internodes terete, thin-walled, smooth. Lateral branches dendroid. Branch complement many, flabellate. Culm-sheaths present. Leaves 1–2 per branch. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs scanty or lacking, deciduous. Leaf-sheath auricles absent. Ligule an eciliate membrane, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades lanceolate, 5–10 cm long, 6–13 mm wide. Leaf-blade midrib indistinct. Leaf-blade venation indistinct. Leaf-blade surface glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 4–5 cm long, bearing 8–10 fertile spikelets on each. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1–2 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 oblanceolate, laterally compressed, 15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 2–3 mm long.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume linear. Lower glume apex acute. Upper glume ovate, chartaceous, without keels. Upper glume apex acuminate.

Florets. Basal sterile florets 1 or 2 or more, barren, without significant palea. Fertile lemma lanceolate, 8–9 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma margins ciliate. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 2–3 mm long overall. Palea 9 mm long, 1 length of lemma. Palea keels ciliolate, adorned above. Palea surface puberulous. Palea apex obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, ovate, 2 mm long, membranous, ciliate, obtuse. Anthers 3, 5 mm long. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Western South America. Trinidad-Tobago. Colombia.

Rhipidocladium racemiflorum (Steudel) McClure. *Smithsonian Contrib. Bot.*, 9: 106 (1973).

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.

TYPE from Mexico. **Basionym or Replaced Name:** *Arthrostylidium racemiflorum* Steud., *Syn. Pl. Glumac.* 1: 336 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Ghiesbrecht 234, no date, Mexico: Veracruz (P; IT: US-1021478 (fragm. ex P), US-2808832 (ex P)).

Illustrations (Books): R.McVaugh, *Flora Nova-Galiciana* Vol.14 *Gramineae* (1983), S.A.Renvoize, *Gramineas de Bolivia* (1998) (36, Fig 4), W.Burger, *Flora Costaricensis* 15, *Gramineae: Fieldiana Botany New Series* 4 (1980) (505, Fig 191).

Images: E.J.Judziewicz, E.J., *American Bamboos* (1999);.

Derivation (Clifford & Bostock 2007): *L. racemus*, stalk of a cluster of grapes; *flos*, flower. The spikelets are borne in racemes.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped densely. Rhizomes short, pachymorph. Butt sheaths absent. Culms arching or leaning, 1000–1500 cm long, 5–10 mm diam., woody. Culm-internodes terete, thin-walled, distally glabrous. Lateral branches dendroid. Branch complement many, flabellate. Culm-sheaths present. Culm-sheath ligule 0.5 mm high. Culm-sheath blade triangular, erect, 3–4 cm long, acuminate. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs setose, deciduous, 6–8 mm long. Leaf-sheath auricles absent. Ligule an eciliate membrane, 0.2–0.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.15 cm long, petiole glabrous or pubescent. Leaf-blades linear or lanceolate, 6–8 cm long, 5–9 mm wide. Leaf-blade midrib indistinct. Leaf-blade surface glabrous, hairless except near base (where woolly tuft beneath).

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 4–6 cm long, bearing 10 fertile spikelets on each. Spikelet packing 2 -rowed. 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 oblanceolate, laterally compressed, 14–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret. Rhachilla elongation 1 mm long.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume linear, 2.8–3.9 mm long, 3 -veined. Lower glume apex acute. Upper glume ovate, 4.4–5.3 mm long, chartaceous, without keels, 5 -veined. Upper glume apex setaceously acuminate.

Florets. Basal sterile florets 1, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, ovate, 6–6.5 mm long, chartaceous, 5–7 -veined, acute. Fertile lemma ovate, 8–10 mm long, coriaceous, without keel, 5–7 -veined, more than 3-veined. Lemma margins ciliate, hairy above. Lemma apex acute, awned, 1 -awned. Principal lemma awn 1–2 mm long overall. Palea bowed outwards, 1 length of lemma. Palea keels ciliolate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, membranous. Anthers 3, 5 mm long, yellow. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico. Mesoamerica, Northern South America, Western South America, Brazil, Southern South America. Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Surinam, Venezuela. Bolivia, Colombia, Ecuador. Brazil Southeast.

Rio de Janeiro. Salta, Tucuman. Durango, Tamaulipas. Veracruz. Sinaloa. Jalisco, Michoacan, Nayarit, Oaxaca.

Rhipidocladum sibilans G. Davidse, E.J. Judziewicz & L.G. Clark. *Novon*, 1(2): 84 (1991).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: G. Davidse & A.C. González 19490, 27 Nov 1981, Venezuela: Anzoátegui: Dist. Libertad: Fila el Guácharo, ridge of the fila above Los Chorros and El Cielo, Serranía de Turimiquire, montane evergreen forest, road from El Vigia to Buenos Aires, 10°1'N, 64°3'W, 1000 m, clumped bamboo to 8 m tall in trees, all plants in local population flowering (MO-3208070; IT: COL, ISC, K, MEXU, MO-3208071, US-2953972, US-2953973, VEN).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (253, Fig. 205), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig. 95).

Illustrations (Journals): *Novon* (1: 85, Fig. 5 (1992)).

Derivation (Clifford & Bostock 2007): *L. sibilis*, hiss. Culms used for making whistles.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms arching or leaning, 400–800 cm long, 7–15 mm diam., woody. Culm-internodes terete, thin-walled, distally glabrous. Lateral branches dendroid. Branch complement many, flabellate. Culm-sheaths present, 1.7–2 times as long as wide. Culm-sheath ligule 1–2 mm high, ciliate. Culm-sheath blade triangular, erect, 14–18 cm long, glabrous on surface, acuminate. Leaves 5–7 per branch. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs ciliate, deciduous, 1–3 mm long. Leaf-sheath auricles absent. Ligule an eciliate membrane, 0.2 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1 cm long. Leaf-blades 50–70 cm long, 1.8–3.5 mm wide. Leaf-blade midrib indistinct. Leaf-blade surface glabrous or pubescent, hairy abaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, 4–6 cm long, bearing 2–3 fertile spikelets on each. Spikelets solitary. 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, subterete, 15–35 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated between glumes. Rhachilla elongation 8 mm long. Rhachilla internodes 3–4 mm long, pilose, hairy at tip.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume linear, 2–4 mm long, 0.5 length of upper glume. Lower glume apex acute, awned, 1 -awned, awn 1–3 mm long. Upper glume lanceolate, 5–8 mm long, 0.5–0.9 length of adjacent fertile lemma, chartaceous, without keels, 5 -veined. Upper glume apex acute, awned, 1 -awned, awn 3–6 mm long.

Florets. Basal sterile florets 2 or more, barren, without significant palea, persisting on inflorescence. Lemma of lower sterile floret similar to fertile lemma, lanceolate, 8–9 mm long, 1 length of fertile lemma, chartaceous, 5–7 -veined, pubescent, hairy at apex, acute, awned. Awn of lower sterile floret 3–6 mm long. Lemma of upper sterile floret 1 length of lower sterile floret. Fertile lemma lanceolate, 9 mm long, coriaceous, light green or purple, mottled with last colour, without keel, 15–19 -veined, more than 3-veined. Lemma margins ciliate, hairy above. Lemma apex acute, pubescent, awned, 1 -awned. Principal lemma awn 3–6 mm long overall. Palea 1 length of lemma, 4 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, membranous. Anthers 3, 5 mm long, yellow. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America. Venezuela.

Rhizocephalus orientalis Boiss. *Diagn. Ser. I*. v. 69 (1844).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), N.Tsvelev, *Grasses of the Soviet Union* (1983).

TYPE from Turkey. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Turkey: Aucher 3066 (G holo, K).

Illustrations (Books): N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 286), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (321, Pl. 117).

Derivation (Clifford & Bostock 2007): *L. oriens*, the east; *-alis*, pertaining to. From the eastern Mediterranean through to Turkey.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Butt sheaths scarious. Culms 0.5–2 cm long. Leaf-sheaths inflated. Ligule an eciliate membrane, 0.5–1 mm long, lacerate. Leaf-blades 0.8–4 cm long, 1–4 mm wide. Leaf-blade surface scaberulous, rough adaxially. 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 capitate, oblong or ovate, 0.8–1.5 cm long, 0.4–0.8 cm wide. Primary panicle branches accrescent to a central axis, with lateral stumps on axis. Panicle axis angular, glabrous. 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 lanceolate, laterally compressed, 3.5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes connate along margins below (slightly), persistent, similar, shorter than spikelet. Lower glume obovate, 2.5–4 mm long, 1 length of upper glume, coriaceous, 1-keeled, 3 -veined. Lower glume surface pubescent, with clavate hairs. Lower glume apex cuspidate. Upper glume obovate, 2.5–4 mm long, 0.6–0.7 length of adjacent fertile lemma, coriaceous, 1-keeled, 3 -veined. Upper glume surface pubescent, with clavate hairs. Upper glume apex cuspidate.

Florets. Fertile lemma oblong, 3.5–6.5 mm long, coriaceous, much thinner on margins, keeled, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough on veins, pubescent, hairy below, with clavate hairs. Lemma apex attenuate, awned, 1 -awned. Principal lemma awn 0.5–1 mm long overall, limb scaberulous. Palea lanceolate, 0.8 length of lemma, 2 -veined.

Flower and Fruit. Lodicules absent. Anthers 2, 0.5–0.7 mm long. Stigmas protogynous. Ovary glabrous. Caryopsis with adherent pericarp, ellipsoid, trigonous, apex rostrate. Embryo 0.25–0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Middle Asia, Caucasus, Western Asia. Turkmenistan, Tadjikistan. Iran, Iraq.

Rhynchoryza subulata (Nees) Baillon. *Hist. Pl. Gram.* :292 (1893).

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 Grasses* (2006).

TYPE from Paraguay. **Basionym or Replaced Name:** *Oryza subulata* Nees, *Fl. Bras. Enum. Pl.* 2(1): 518 (1829). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Habitat in confinibus regni Paraguayani et in Rio Grande do Sul, locis paludosis, *Sellow s.n.*.

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 1, Aristidoideae a Pharoideae (2012) (246), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (156, Fig. 38), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (38, Fig. 6 as *Oryza subulata*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (40, Fig. 6), B.Rosengurt, *Gramineas Uruguayas I* (1970) (278, Fig. 115).

Derivation (Clifford & Bostock 2007): *L. subulus*, a fine point; *-ata*, possessing. Glumes, lemmas or calluses sharply tapered.

Classification. Subfamily Ehrhartoideae. Tribe: Zizaniinae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 200–300 cm long. Leaf-sheath auricles erect. Ligule an eciliate membrane, 18–30 mm long. Leaf-blades 60–120 cm long, 10 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 20–30 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, angular, bibracteate.

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 lanceolate, laterally compressed, 17–20 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 2 or more, similar, barren, without significant palea. Lemma of lower sterile floret ovate, 2–2.5 mm long, 0.1 length of fertile lemma, membranous, 1 -veined, without lateral veins, cuspidate. Fertile lemma elliptic, 7–10 mm long (body), indurate, keeled, 5 -veined, more than 3-veined. Lemma lateral veins ribbed. Lemma surface scaberulous. Lemma margins involute. Lemma apex rostrate, with a conical beak, with this appendage 10 mm long, awned. Principal lemma awn 10–25 mm long overall. Palea elliptic, 1 length of lemma, indurate, 3 -veined, without keels.

Flower and Fruit. Lodicules 2. Anthers 6. Caryopsis with adherent pericarp, 6.5–7 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil, Southern South America. Surinam. Brazil South. Argentina Northeast, Uruguay.

Santa Catarina. Buenos Aires, Chaco, Corrientes, Entre Rios, Santa Fe.

Rhytachne furtiva Clayton. *Kew Bull.* xx. 258 (1966).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Upper Volta. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Upper Volta: 21 mi [ca. 34 km] NW of Batie on road to Gaoua, round edge of small pool on clay soil, 12 Oct 1960, *Rose-Innes CG31536* (HT: K).

Illustrations (Books): F.N.Hepper, *F.W.T.A.* 3(2) (1972) (510, Fig.462).

Illustrations (Journals): *Kew Bulletin* (20:259, Fig.1 (1966)).

Derivation (Clifford & Bostock 2007): *L. secret*, hidden. Lemma partially hidden.

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations intravaginal, flabellate. Culms 60 cm long, 2–3 -noded. Leaf-sheaths keeled. Ligule an eciliate membrane, 1 mm long. Leaf-blades conduplicate, 15–30 cm long, 2–5 mm wide. Leaf-blade surface glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 10–18 cm long. Rhachis fragile at the nodes, semiterete, 3 mm wide, glabrous on surface, glabrous on margins. Rhachis internodes cuneate, 5–7 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets squeezed between internode and pedicel (the upper glume peeping through), in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, foliaceous, curved, 5–6 mm long, glabrous.

Sterile Spikelets. Companion sterile spikelets rudimentary, ovate, 1 mm long, deciduous with the fertile. Companion sterile spikelet glumes chartaceous, obtuse, 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 or ovate, dorsally compressed, 5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, winged on margins, winged narrowly, winged above, 9 -veined. Lower glume surface rugose, rough generally or on flanks. Lower glume apex acute, muticous. Upper glume oblong, membranous, 3 -veined. Upper glume surface rugose, rough in lines (midline). Upper glume muticous.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 6 mm long, hyaline, acute. Fertile lemma oblong, 6 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea 1 length of lemma.

Flower and Fruit. Lodicules 2, oblong, 0.75 mm long, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West Tropical Africa. Burkina, Ghana.

Rhytachne glabra (Gledhill) Clayton. *Kew Bull.* xxiii. 295 (1969).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Sierra Leone. **Basionym or Replaced Name:** *Lepargochloa glabra* Gledhill, *Bol. Soc. Brot., ser. 2*, 40: 65, f. 1, t. 1 (1966). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sierra Leone: Tingi Mountains, *Morton & Gledhill SL1885* (HT: SL; IT: BM, GHANA, K, IFAN, WAG).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. smooth. Leaf-blades lacking hairs.

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 30–90 cm long, 2–3 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1 mm long. Leaf-blades flexuous, filiform, involute, 20–60 cm long, 1–2 mm wide.

Inflorescence. Inflorescence composed of racemes. Peduncle widened at apex. Racemes 1, single, smoothly terete, 3–6 cm long. Rhachis fragile at the nodes, semiterete, 5 mm wide, glabrous on surface, glabrous on margins. Rhachis internodes columnar, 7 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, linear, foliaceous, curved, glabrous.

Sterile Spikelets. Companion sterile spikelets well-developed, lanceolate or ovate, 6–7 mm long, as long as fertile, deciduous with the fertile. Companion sterile spikelet glumes coriaceous, ribbed, muricate, 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 or ovate, dorsally compressed, 6–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, purple, without keels, 7 -veined. Lower glume lateral veins ribbed. Lower glume surface smooth or muricate, rough on veins. Lower glume apex entire or dentate, 2 -fid, acute, muticous. Upper glume oblong, membranous, 1-keeled, 5 -veined. Upper glume apex acuminate, mucronate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 5 mm long, membranous, 4 -veined, obtuse. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, 4 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea 0.6–0.8 length of lemma.

Flower and Fruit. Anthers 3, 3 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West Tropical Africa, East Tropical Africa. Guinea, Sierre Leone.

Rhytachne gonzalezii G. Davidse. *Brittonia*, 36(4): 402 (1984).

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 Grasses* (2006).

TYPE from Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Venezuela: Guárico: Distrito Infante: Parque Nacional Aguaro-Guariquito, Morichal Charcote, ca. 9°4'-9°2'N, 67°64'-67°68'W, elev. 68 m, Dec 1981, *F. Delascio, R. Montes & G. Davidse 111151* (HT: MO; IT: K, MEXU, NY, US, VEN).

Illustrations (Journals): *Brittonia* (36: 403, Fig 1 (1984)).

Derivation (Clifford & Bostock 2007): in honor of Angel Custodio Gonzalez (1943-) Venezuelan botanist.

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Annual. Culms 20–65 cm long. Culm-internodes distally glabrous. Culm-nodes black. Lateral branches ample. Leaf-sheaths without keel, striately veined, glabrous on surface.

Leaf-sheath auricles erect, 0.5–1.5 mm long. Ligule a ciliolate membrane, 0.5–1.1 mm long. Leaf-blades filiform or linear, involute, 5–30 cm long, 1–4 mm wide. Leaf-blade surface scaberulous, rough adaxially.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 1, single, smoothly terete, 3–8 cm long, 0.8–1.3 mm wide. Rhachis fragile at the nodes, semiterete, glabrous on surface, glabrous on margins. Rhachis internodes cuneate, 2.7–4.9 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, linear, foliaceous, curved, 2.8–5.2 mm long, glabrous.

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, 3–4.9 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, 4–7 -veined. Lower glume surface muricate, rough generally or on flanks. Lower glume apex dentate, 2 -fid, muticous or mucronate or awned, 1 -awned, awn 0–1.9 mm long. Upper glume oblong, membranous, 3 -veined. Upper glume awned, 1 -awned, awn 5–16 mm long.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret lanceolate, 2.3–3.1 mm long, hyaline, acute. Palea of lower sterile floret 1.2–2.1 mm long. Fertile lemma oblong, 1.8–3.1 mm long, hyaline, without keel, 0–3 -veined. Lemma apex acute. Palea 0.9–1.6 mm long, hyaline.

Flower and Fruit. Anthers 3, 0.6–1.2 mm long. Stigmas 2. Caryopsis with adherent pericarp, oblong, isodiametric, 2–2.3 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Surinam, Venezuela. Brazil North. Pará.

Rhytachne gracilis Stapf. *Journ. de Bot.* 19:98 (1905).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Pobéguin 494*, Guine? Kouroussa (K; IT:P).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3083 (1922)).

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

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Annual, culms solitary. Culms slender, 15–60 cm long, 2–3 -noded. Ligule a ciliolate membrane. Leaf-blades filiform, 5–8 cm long, 1 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 5–10 cm long. Rhachis fragile at the nodes, semiterete, glabrous on surface, glabrous on margins. Rhachis internodes cuneate, 2–3 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, linear, foliaceous, curved, 2–3 mm long, glabrous.

Sterile Spikelets. Companion sterile spikelets represented by awns, comprising 1 awn, 3–5 mm long, deciduous with the fertile.

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 pubescent, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, chartaceous, without keels, 9 -veined. Lower glume surface muricate or rugose (inconspicuously). Lower glume margins ciliolate. Lower glume apex acute, awned, 2 -awned, awn 3–5 mm long. Upper glume lanceolate, membranous, 3 -veined. Upper glume awned, 1 -awned, awn 3 mm long.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, 2 mm long, hyaline, 2 -veined, acute. Fertile lemma lanceolate, 1.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute.

Flower and Fruit. Anthers 3, 1.5 mm long.
Distribution (TDWG). Continent. Africa.
Country /Province /State. West Tropical Africa, West-Central Tropical Africa. Burkina, Guinea, Ivory Coast, Sierre Leone.

Rhytachne guianensis (Hitchcock) Clayton. *Kew Bull.* xx. 262 (1966).

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 Grasses* (2006).

TYPE from Guyana. **Basionym or Replaced Name:** *Manisuris guianensis* Hitchc., *Contr. U.S. Natl. Herb.* 22(6): 510, f. 86 (1922). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.S. Jenman 4530*, Oct 1888, Guyana: Lama Stop-off, near Georgetown (US-1039395; IT: K, MO).

Illustrations (Books): E.Judziwicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig.96).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From British Guiana, now Guyana.

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Perennial. Culms erect, 100 cm long. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades convolute, 15–25 cm long, 3–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 10–20 cm long. Rhachis fragile at the nodes, semiterete, glabrous on surface, glabrous on margins. Rhachis internodes columnar, 5–8 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, linear, foliaceous, curved, glabrous.

Sterile Spikelets. Companion sterile spikelets rudimentary, comprising 2 subequal glumes without lemmas, 0.5–1 mm long, deciduous with the fertile. Companion sterile spikelet glumes chartaceous, 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, 5–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels. Lower glume surface smooth. Lower glume apex acute, muticous. Upper glume oblong, membranous, 3 -veined. Upper glume muticous.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, hyaline, acute. Palea of lower sterile floret 0.66 length of lemma. Fertile lemma lanceolate, hyaline, without keel. Lemma apex acute. Palea 0.5 length of lemma.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. **Northern South America, Western South America, Brazil.** Guyana, Surinam, Venezuela. Colombia. Brazil North. Amapa, Amazonas. Oaxaca. Chiapas.

Rhytachne latifolia Clayton. *Kew Bull.*, 32(4): 770 (1978).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Greenway & Kanuri 15454*, 16 Jul 1973, Tanzania: Kilosa District: Kipiri water hole, Mile 18.1 from highway, alt. 1650 ft, grey cracking clay on river bank (K; IT: MO-2248986).

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 Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 40–100 cm long. Ligule a ciliolate membrane. Collar dark (brown). Leaf-blades flat, 15–50 cm long, 4–8 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 10–15 cm long. Rhachis fragile at the nodes, semiterete, glabrous on surface, glabrous on margins. Rhachis internodes cuneate, 5–10 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, linear, foliaceous, curved, 6–8 mm long, glabrous.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels or rudimentary, 0–1 mm long, deciduous with the fertile. Companion sterile spikelet glumes chartaceous, 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 ovate, dorsally compressed, 5.5–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, winged on margins, winged narrowly, winged above. Lower glume surface smooth. Lower glume apex acute, muticous. Upper glume oblong, membranous, 3 -veined. Upper glume muticous.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, hyaline, acute. Fertile lemma lanceolate, hyaline, without keel. Lemma apex acute.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East Tropical Africa, South Tropical Africa, Southern Africa. Tanzania. Zambia. Kwazulu-Natal.

Rhytachne lijiangensis B.S.Sun. *Acta Bot. Yunnanica*, 20(1): 33 (1998).

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

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Yunnan: Lijiang, Jinzhuangqu, roadside, Jingsha River side, in thickets of sandy beach, 1900 m, 24 Aug. 1984, *Yunnan Univ. Exped. 84916* (HT: YUKU).

Illustrations: None found.

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, 100–200 cm long. Lateral branches ample, arising from upper culm. Leaves cauline. Leaf-sheaths glabrous on surface or hispid, with tubercle-based hairs. Ligule a ciliolate membrane, 0.8–1 mm long. Leaf-blades linear or lanceolate, flat, 10–20 cm long, 5–18 mm wide. Leaf-blade surface hispid, sparsely hairy, with tubercle-based hairs. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 10 cm long. Rhachis fragile at the nodes, semiterete, glabrous on surface, glabrous on margins. Rhachis internodes columnar, with the lower often bearing triads. 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, oblong.

Sterile Spikelets. Companion sterile spikelets rudimentary or well-developed, deciduous with the fertile. Companion sterile spikelet glumes chartaceous, 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 or ovate, dorsally compressed, 0.3–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate to ovate, 1 length of spikelet, coriaceous, without keels, keel-less except near apex. Lower glume surface convex or flat, scabrous, rough at apex. Lower glume margins ciliolate. Lower glume apex acute, muticous. Upper glume lanceolate, membranous, 1-keeled. Upper glume muticous.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, hyaline, acute. Fertile lemma lanceolate, hyaline, without keel. Lemma apex acute.

Flower and Fruit. Anthers 3, 3–4 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.
Yunnan.

Rhytachne megastachya Jacques-Felix. *Rev. Bot. Appliq.* ii. 552 (1952).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.G. Adam 5163*, 21 May 1949, Guinée Française: Nzérékor? Mt. Nimba (Zouépo) (P; IT: MO-2652758).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. *megas*, large; *stachys*, spike as of an ear of wheat. Spikelets unusually large for the genus.

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 100–180 cm long, 2–3 -noded. Ligule an eciliate membrane, 0.5 mm long. Collar concolorous. Leaf-blades flat or convolute, 25–50 cm long, 2–5 mm wide. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 20–40 cm long. Rhachis fragile at the nodes, semiterete, 2 mm wide, glabrous on surface, glabrous on margins. Rhachis internodes cuneate, 6–8 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, linear, foliaceous, curved, glabrous.

Sterile Spikelets. Companion sterile spikelets rudimentary, comprising 2 subequal glumes without lemmas, 0–1 mm long, deciduous with the fertile. Companion sterile spikelet glumes chartaceous, 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, 5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, 5 -veined. Lower glume surface smooth. Lower glume apex acute, muticous. Upper glume oblong, membranous, 3 -veined. Upper glume muticous.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, hyaline, acute. Fertile lemma lanceolate, hyaline, without keel. Lemma apex acute.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West Tropical Africa. Ghana, Guinea, Sierre Leone.

Rhytachne perfecta Jacques-Felix. *Journ. Agric. Trop. & Bot. Appliq.* i. 41 (1954).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Brun 541*, Guine? Taban Valley (P).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. complete. Pedicelled spikelet bisexual.

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes short. Basal innovations extravaginal. Culms 60–70 cm long, 2–4 -noded. Ligule a ciliolate membrane, 3–4 mm long. Leaf-blades involute, 25–30 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 10–15 cm long. Rhachis fragile at the nodes, semiterete, 2 mm wide, pubescent on surface, glabrous on margins. Rhachis internodes clavate, 8 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets in

pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, linear, terete, straight, 4 mm long, 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 oblong, dorsally compressed, 7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, winged on margins, winged narrowly, winged above, 5 -veined. Lower glume lateral veins ribbed. Lower glume surface tuberculate, rough on veins, pubescent. Lower glume margins ciliate. Lower glume apex acute, awned, 2 -awned, awn 2–7 mm long. Upper glume oblong, membranous, 3 -veined. Upper glume margins ciliate. Upper glume awned, 1 -awned, awn 20–25 mm long.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret lanceolate, 8 mm long, hyaline, acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma lanceolate, 6 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea 0 -veined.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West Tropical Africa. Guinea.

Rhytachne robusta Stapf. *Prain, Fl. Trop. Afr.* ix. 82 (1917).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Angola. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Gossweiler 2721 (in part)*, Angola: Benguela (K).

Illustrations (Books): G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (282, Fig 179).

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

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms 60–120 cm long, 2–3 -noded. Leaf-sheaths glabrous on surface or pilose. Ligule a ciliate membrane, 3 mm long. Leaf-blades 15–30 cm long, 2–4 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins scabrous. Leaf-blade apex filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 10–17 cm long. Rhachis fragile at the nodes, semiterete, 2 mm wide, glabrous on surface, ciliate on margins. Rhachis internodes cuneate, 9–10 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, linear, foliaceous, curved, 7–8 mm long, ciliate.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels or rudimentary, comprising 2 subequal glumes without lemmas, 0–2 mm long, deciduous with the fertile. Companion sterile spikelet glumes chartaceous, 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, 7–9 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, 4–5 -veined. Lower glume surface asperulous. Lower glume apex acute, muticous. Upper glume lanceolate, membranous, 5 -veined. Upper glume margins ciliate. Upper glume apex acute, muticous.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, hyaline, 2 -veined, ciliate on margins, acute. Fertile lemma lanceolate, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma margins ciliate. Lemma apex acute.

Flower and Fruit. Anthers 3, 4 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West Tropical Africa, South Tropical Africa, Southern Africa. Angola, Zambia. Namibia.

Rhytachne rottboellioides Desv. *Ham. Prod. Pl. Ind. Occ.* 12 (1825).

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 Grasses* (2006).

TYPE from Antilles. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Antilles, *Hb. Prof. Desvaux* according to Clayton (1978) the type apparently lost.

Recent Synonyms: *Rhytachne caespitosa* Baker, *Journ. Linn. Soc.* 22: 533. (1887).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (286, Fig. 222), W. Robyns (1929 and 1934). *Flora Agrostologique du Congo Belge et du Ruanda-Urundi*, I. Maydees et Andropogonees and II. Panicees. Bruxelles, Goemaere (73, Pl.4 as forma *tenuis*), R.M.Pohill, F.T.E.A., *Gramineae* (3(1982):844, Fig. 198), G.V.Pope et al., *Flora Zambesiaca* 10, L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (521, Fig 415), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (203, Fig. 72 as *R. caespitosa*), S.A.Renvoize, *Gramineas de Bolivia* (1998) (Fig. 147), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (257, Fig. 207), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1184, Fig. 230 & 1192, Fig. 233), R.Pilger, *Die Naturlichen Pflanzenfamilien* 14e (1940) (as *Rottboellia loricata*).

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

Classification. Subfamily Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms 20–100 cm long. Ligule a ciliolate membrane. Leaf-blades filiform, involute, 5–25 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 2–20 cm long. Rhachis fragile at the nodes, semiterete, glabrous on surface, glabrous on margins. Rhachis internodes cuneate, 2–5(–6) mm long, 1 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, linear, foliaceous, curved, glabrous.

Sterile Spikelets. Companion sterile spikelets represented by barren pedicels or represented by awns, 0–5 mm long, deciduous with the fertile.

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, 2–5(–6) mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, 5–7 -veined. Lower glume surface smooth or rugose or muricate, rough generally or on flanks. Lower glume apex entire or dentate, 2 -fid, obtuse or acute or acuminate, muticous or mucronate or awned, 1 -awned, awn 0–5 mm long. Upper glume oblong, membranous, 3 -veined. Upper glume muticous or mucronate or awned, 1 -awned, awn 0–5 mm long.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, 0.9 length of spikelet, hyaline, 3 -veined, acute. Fertile lemma oblong, hyaline, without keel, 1–3 -veined, 0–3 -veined, one-veined or several-veined. Lemma margins ciliolate. Lemma apex acute. Palea absent or minute.

Distribution (TDWG). Continent. Africa, North America, South America.

Country /Province /State. West Tropical Africa, West-Central Tropical Africa, Northeast Tropical Africa, East Tropical Africa, South Tropical Africa, Southern Africa, Western Indian Ocean. Ghana, Ivory Coast, Mali, Nigeria, Senegal, Sierre Leone. Cameroon, Gabon, Rwanda, DRC. Chad, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Kwazulu-Natal, Eastern Cape. Madagascar. **Mexico.** Gulf (Mexico), Southeast Mexico. **Mesoamerica, Caribbean, Western South America, Brazil, Southern South America.** Cuba. Bolivia. Brazil Southeast. Paraguay.

Minas Gerais. Santa Catarina. Veracruz. Chiapas.

Rhytachne triaristata (Steud.) Stapf. *Prain, Fl. Trop. Afr.* ix. 85 (1917).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Guinea. **Basionym or Replaced Name:** *Lepturopsis triaristata* Steud., *Syn. Pl. Glumac.* 1: 358 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ins. Loss Guineae..

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 Panicoideae. Tribe: Sacchareae.

Habit, Vegetative Morphology. Annual, caespitose. Culms slender, 40–60 cm long, 3–4 -noded. Ligule a ciliolate membrane. Leaf-blades filiform, convolute, 10–20 cm long, 1.5–2 mm wide. Leaf-blade surface puberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, smoothly terete, 5–12 cm long. Rhachis fragile at the nodes, semiterete, glabrous on surface, glabrous on margins. Rhachis internodes cuneate, 4–6 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, linear, foliaceous, curved, 5–8 mm long, ciliate.

Sterile Spikelets. Companion sterile spikelets represented by awns, comprising 2 awns, 5–7 mm long, deciduous with the fertile.

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 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, winged on margins, winged narrowly, 6–7 -veined. Lower glume surface rugose (strongly). Lower glume margins ciliolate. Lower glume apex acuminate, awned, 2 -awned, awn 5–7 mm long. Upper glume lanceolate, membranous, 3 -veined. Upper glume awned, 1 -awned, awn 5–7 mm long.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret lanceolate, 2 mm long, hyaline, 1 -veined, without lateral veins, acute. Fertile lemma lanceolate, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute. Palea 0.5 length of lemma.

Flower and Fruit. Anthers 3, 0.5–0.7 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West Tropical Africa, West-Central Tropical Africa, Northeast Tropical Africa, South Tropical Africa. Burkina, Ghana, Ivory Coast, Mali, Nigeria, Senegal, Sierre Leone, Togo. Cameroon. Chad, Sudan. Zambia.

Richardsiella eruciformis Elffers & Kennedy-O'Byrne. *Kew Bull.* 1957:456 (1957).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Zambia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *H.M. Richards 5380*, 9 Apr 1955, N. Rhodesia: Abercorn dist.: Chilongwelo, elev. 4800 ft, sands (LE). herb. Kew..

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (2(1999):149 t. 41).

Derivation (Clifford & Bostock 2007): *L. eruca*, caterpillar; *forma*, shape. Racemes bear a fanciful resemblance to caterpillars.

Classification. Subfamily Chloridoideae. Tribe: Eragrostideae.

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms 7–18 cm long, 0.2–0.5 mm diam. Leaves mostly basal. Ligule a fringe of hairs. Leaf-blades 1–6.5 cm long, 0.5–1.5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 3–11, borne along a central axis, spreading, arcuate, unilateral, 0.5–1.2 cm long. Central inflorescence axis 1–7 cm long, tip filiform. Rhachis flattened, ciliate on margins, terminating in a barren extension, extension bristle-like. Spikelets spreading, 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 oblong, laterally compressed, 1.6–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Spikelet callus bearded.

Glumes. Glumes deciduous, similar, reaching apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1.2–1.4 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, mucronate. Upper glume lanceolate, 1.5–2 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein tuberculate, ciliate. Upper glume lateral veins absent. Upper glume apex acuminate, mucronate.

Florets. Fertile lemma elliptic, 1–1.3 mm long, hyaline, keeled, keeled above, 1 -veined, 0–3 -veined, one-veined. Lemma margins ciliate. Lemma apex obtuse, mucronate. Palea 1 length of lemma, 2 -veined. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2. Anthers 2, 0.25–0.4 mm long. Caryopsis with free soft pericarp, 0.3–0.4 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

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

Country /Province /State. **West-Central Tropical Africa, South Tropical Africa.** Congo, DRC. Zambia.

Rostraria amblyantha (Boiss.) J. Holub. *Preslia*, 70(2): 110 (1998).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk *amblys*, blunt; *anthos*, flower. Lemma apices rounded.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms erect, slender, 20–40 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths tight, smooth, glabrous on surface. Ligule an eciliate membrane, 1 mm long, obtuse. Leaf-blades flat or conduplicate, 10–20 cm long, 1–4 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides. Leaf-blade margins smooth. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, continuous or interrupted, 2–7 cm long, 0.5–1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, similar to fertile lemma in texture, shiny, gaping. Lower glume linear, 2 mm long, 0.8–1 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex acute. Upper glume elliptic, 2–2.5 mm long, 1–1.2 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 3 -veined. Upper glume surface glabrous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 2 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface tuberculate, glabrous. Lemma apex emarginate, muticous or mucronate. Palea gaping, hyaline. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.5 mm long. Ovary glabrous.

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

Country /Province /State. **Western Asia.** Cyprus.

Rostraria azorica S.Hend. *Bot. J. Linn. Soc.* 141(1): 126 . (2003).

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

TYPE from Azores. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Azores: Santa Maria, on roadside near the airport, 12 Jun 1974, A. Hansen 92 (HT: K).

Illustrations: None found.

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 2.5–18 cm long. Lateral branches lacking. Leaf-sheaths pubescent. Ligule an eciliate membrane, 0.5–1.5 mm long, lacerate, obtuse. Leaf-blades 2–11 cm long, 1.5–3 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong, 1.5–8 cm long, 0.3–0.9 cm wide. Panicle axis scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 obovate, laterally compressed, 5.5–9 mm long, 2–5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent, with 0.1–0.5 mm long hairs.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture, shiny, gaping. Lower glume elliptic, 3–6.5 mm long, 0.7 length of upper glume, membranous, 1-keeled, 2–3 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume elliptic, 4–7 mm long, 0.8–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 5 -veined. Upper glume primary vein scabrous. Upper glume apex acute, muticous or mucronate.

Florets. Fertile lemma elliptic, 5–6 mm long, membranous, shiny, keeled, 5 -veined, more than 3-veined. Lemma surface smooth or papillose, glabrous or pubescent. Lemma hairs 0.5–0.75 mm long. Lemma apex emarginate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.8 way up back of lemma, curved or geniculate, 2.25–4 mm long overall, with a straight or slightly twisted column. Palea gaping, 0.75–1 length of lemma. Palea keels scaberulous. Palea apex dentate, 2 -fid, awned, awns 0.31 mm long. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.9–1.6 mm long. Ovary glabrous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Macaronesia. Azores.

Rostraria balansae (Coss. & Durand) Holub. *Folia Geobot. Phytotax*, 9 (3): 271 (1974).

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

TYPE from Algeria. **Basionym or Replaced Name:** *Koeleria balansae* Coss. & Durand, *Ann. Sci. Nat., Bot., ser.*, 1: 229 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: *B. Balansa* 686 PL. ALGER., 8 May 1852, Algeria: Oran (US-82043; IT:L).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Benjamin Balansa (1825–1892) French botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 6–30 cm long. Lateral branches lacking or sparse. Leaf-sheaths without keel, striately veined, pubescent. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.5–1.2 mm long, truncate. Leaf-blades linear or lanceolate, 4–8 cm long, 2.5 mm wide, flaccid. Leaf-blade surface pubescent. Leaf-blade apex abruptly acute, hooded.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle spiciform, oblong, continuous or interrupted, 1.5–5 cm long, 0.7–1.5 cm wide. Panicle axis pubescent. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, pubescent.

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, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent.

Glumes. Glumes persistent, shorter than spikelet or reaching apex of florets, similar to fertile lemma in texture, gaping. Lower glume lanceolate, 3 mm long, 0.75 length of upper glume, membranous, much thinner on margins, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous or pubescent. Lower glume apex attenuate. Upper glume lanceolate, 4 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume surface glabrous or pubescent. Upper glume apex acute.

Florets. Fertile lemma oblong, 3 mm long, membranous, much thinner on margins, keeled, 3 -veined, 0–3 -veined. Lemma surface pilose. Lemma apex dentate, 2 -fid, setaceously acuminate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.8 way up back of lemma, 2.5 mm long overall. Palea gaping, 2.5 mm long, hyaline. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.6 mm long, membranous. Anthers 3, 1.2–1.8 mm long. Ovary glabrous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northern Africa. Algeria, Morocco.

Rostraria berythea (Boiss. & Blanche) Holub. *Folia Geobot. Phytotax*, 9 (3): 271 (1974).

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

Basionym or Replaced Name: *Lophochloa berythea* (Boiss. & Blanche) Bor, *Taxon* 16: 68 (1967).

Illustrations (Books): N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 256 as *Lophochloa*), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (350, Pl. 132 as *Lophochloa*).

Derivation (Clifford & Bostock 2007): from Berythea, now Beirut, Lebanon.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 20–40 cm long. Ligule an eciliate membrane. Leaf-blades 10–18 cm long, 3–5 mm wide, flaccid. Leaf-blade surface glabrous or pubescent, sparsely hairy, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong or ovate, 3–7 cm long, 1–2 cm wide. Panicle axis puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, similar to fertile lemma in texture, shiny, gaping. Lower glume lanceolate, 4–4.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein ciliate. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex attenuate. Upper glume ovate, 5–6 mm long, 0.75 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume apex attenuate.

Florets. Fertile lemma ovate, 6–6.5 mm long, membranous, much thinner on margins, keeled, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn subapical, 4 mm long overall. Palea gaping, hyaline. Palea keels scaberulous. Palea apex awned, awns 1 mm long. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3. Ovary glabrous.

Distribution (TDWG). Continent. Temperate Asia.

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

Rostraria clarkeana (Domin) Holub. *Folia Geobot. Phytotax.*, 9 (3): 271 (1974).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (as *Lophochloa*).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *-ana*, indicating connection. In honor of Charles Baron Clarke (1832–1906) English-born Indian teacher-botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 10–25 cm long. Ligule an eciliate membrane. Leaf-blades 4–8 cm long, 1–3 mm wide, flaccid. Leaf-blade surface pilose, sparsely hairy, hairy abaxially. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle spiciform, lanceolate or oblong, 2.4–4.5 cm long, 1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, 3.2 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, similar to fertile lemma in texture, shiny, gaping. Lower glume lanceolate, 2.6 mm long, 0.75 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex acute. Upper glume elliptic, 3.1 mm long, 1.1 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume surface glabrous. Upper glume apex acute.

Florets. Fertile lemma elliptic, 2.8 mm long, membranous, much thinner on margins, keeled, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned.

Principal lemma awn subapical, 2–4 mm long overall, 1 length of lemma. Palea gaping, hyaline. Palea keels scaberulous. Rhachilla extension pubescent.

Flower and Fruit. Anthers 3. Ovary glabrous.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Pakistan, West Himalaya. Jammu Kashmir.

Rostraria cristata (L.) Tsvelev. *Novosti Sist. Vyssh. Rast.* 7: 47 (1971).

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 Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (as *Lophochloa phleoides*), T.G.Tutin et al, *Flora Europaea* 5 (1980) (as *Lophochloa*), N.Tsvelev, *Grasses of the Soviet Union* (1983), T.Koyama, *Grasses of Japan and its neighboring regions* (1987) (as *Koeleria phleoides*).

TYPE from Portugal. **Basionym or Replaced Name:** *Festuca cristata* L., *Sp. Pl.* 1: 76 (1753). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: Portugal (LINN-92.94). LT designated by Sherif & Siddiq, *Fl. Libya* 145: 167 (1988).

Recent Synonyms: *Lophochloa cristata* (L.) Hylander, *Bot. Notiser* 1953, 355 (1953). *Koeleria phleoides* (Vill.) Pers., nom superfl., *Syn. i.* 97 (1805).

Lophochloa phleoides Trin., nom superfl., *Fund. Agrost.* 150 (1820).

Rostraria pubescens Trin., nom superfl., *Fund. Agrost.* 150 (1820).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (353), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 257 as *Lophochloa*), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (39, Fig 18), L.Boulos, *Flora of Egypt* 4 (2005) (163, Fig 45), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (250, Fig 193), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (61, Pl 61 as *Koeleria*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (458, Fig. 89), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (360), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (302 as *Lophochloa*), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (123, Fig. 19), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (155, Fig. 23), D.Sharp & B.K.Simon, *AusGrass*. *Grasses of Australia*. CD-Rom Version 1.0. (2002), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (756), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (314, Fig. 106 as *Lophochloa*), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (80, Fig. 23 as *Koeleria phleoides*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (164, Fig. 45 as *Lophochloa phleoides*), M.N.Correa, *Flora Patagonica* Parte III, *Gramineae* (1978) (137, Fig. 86 as *Lophochloa phleoides*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (as *Koeleria phleoides*), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (2:88(1980) as *Koeleria phleoides*).

Illustrations (Journals): *Ruizia* (13:174, Fig 19g-i (1993) as *Lophochloa*).

Images: D.Sharp & B.K.Simon, *AusGrass*. *Grasses of Australia*. CD-Rom Version 1.0. (2002);, K.O.Mallett (ed.). *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*;, L.Boulos, *Flora of Egypt* 4 (2005);.

Derivation (Clifford & Bostock 2007): L. crested. Inflorescence forming a crest.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms erect or decumbent, 5–45 cm long. Leaves mostly basal. Ligule an eciliate membrane, 1 mm long. Leaf-blades flat, 2.5–15 cm long, 1.5–8 mm wide, flaccid. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear or lanceolate, continuous or interrupted, 1.5–10 cm long, 0.6–1.6 cm wide. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, 3–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pubescent.

Glumes. Glumes persistent, similar, reaching apex of florets or shorter than spikelet, similar to fertile lemma in texture, shiny, gaping. Lower glume lanceolate, 2–3 mm long, 0.7 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous or puberulous. Lower glume apex acuminate. Upper glume elliptic, 3–4 mm long, 1 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume apex acute.

Florets. Fertile lemma oblong, oblong in profile, 3–4 mm long, membranous, much thinner on margins, shiny, keeled, 5 -veined, more than 3-veined. Lemma surface smooth or tuberculate, glabrous or pubescent. Lemma apex obtuse or acute, mucronate or awned, 1 -awned. Principal lemma awn apical or subapical, 0–3 mm long overall. Palea gaping. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.3 mm long. Ovary glabrous.

n = 13 (1 ref TROPICOS).

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

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

Country /Province /State. : Great Britain (*). : Balears, Corsica, France, Portugal, Sardinia, Spain. : Albania, Bulgaria, Greece, Italy, Crete, Sicily, Turkey Europe, Yugoslavia. Estonia, Latvia, Lithuania, Krym. **Northern Africa, Macaronesia, West Tropical Africa, Northeast Tropical Africa, Southern Africa** (*). Algeria, Egypt, Libya, Morocco, Tunisia. Azores, Canary Is, Cape Verde, Madeira. Eritrea, Sudan. Northern Cape, Western Cape, Eastern Cape. **Middle Asia, Caucasus, Western Asia, Arabian Peninsula, China, Eastern Asia.** Kirgizistan, Turkmenistan, Tadjikistan, Uzbekistan. Iran, Iraq. Gulf States, Oman. Japan. **Indian Subcontinent.** Pakistan, West Himalaya. **Australia** (*). Western Australia (*), South Australia (*), Queensland (*), New South Wales (*), A.C.T. (*), Victoria (*), Tasmania (*), Lord Howe-Norfolk Is (*). **Southwestern USA, Southeastern USA, Mexico.** California. Florida, Louisiana. Northwest Mexico. **Caribbean, Western South America, Brazil, Southern South America.** Bermuda. Brazil South. Argentina Northeast, Chile North, Chile Central, Chile South.

Ereman, South-West. Southern. South East. Coast, Tablelands, Western Slopes, Western Plains. Rio Grande do Sul. Tucuman. Buenos Aires, Distrito Federal, Entre Rios, La Pampa, Santa Fe. Tarapaca. Coquimbo, Valparaiso, Santiago, O'Higgins, Maule. Magellanes. Baja California.

Rostraria festucoides (Link) C.RomeroZarco. *Lagasalia*, 18(2): 310 (1996).

Recent Synonyms: *Trisetaria michelii* (Savi) D.Heller, *Conspect. Fl. Oriental.*, 6: 92: (1991).

Illustrations: None found.

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.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 2–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–4 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, 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. Lower 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.

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

Region. Northern Europe, Southwestern Europe, and Southeastern Europe.

Country /Province /State. : GB Aliens (Ryves et al). : France, Portugal. : Italy. **Northern Africa** and **Macaronesia**. Algeria. **Western Asia**. Cyprus, East Aegean Is, Lebanon-Syria, Turkey.

Rostraria hispida (Savi) M. Dogan. *Notes Roy. Bot. Gard. Edinburgh*, 40(3): 509: (1983).

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

Basionym or Replaced Name: *Festuca hispida* Savi, *Fl. Pis.* 1: 117 (1798).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. bearing coarse stiff hairs. Plant wholly or partly rough to the touch.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 5–30 cm long. Leaf-sheaths pilose. Ligule an eciliate membrane, 0.5–0.9 mm long, truncate. Leaf-blades 2–10 cm long, 1–7 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, sparsely hairy, hairy adaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong or ovate, 1–6 cm long, 0.7–1 cm wide. Panicle axis puberulous. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes glabrous.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture, shiny, gaping. Lower glume lanceolate, 2–5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein eciliate or ciliolate. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex acuminate. Upper glume lanceolate, 3–4 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein eciliate or ciliolate. Upper glume surface glabrous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate or ovate, 3–4 mm long, membranous, much thinner on margins, keeled, 5 -veined, more than 3-veined. Lemma lateral veins ribbed. Lemma surface setose. Lemma hairs 0.5 mm long. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn subapical, 3–5 mm long overall. Palea gaping, 1 length of lemma, hyaline. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.7–1 mm long. Ovary glabrous.

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

Region. Southwestern Europe, Southeastern Europe.

Country /Province /State. : Corsica, Sardinia. : Greece, Italy, Sicily. **Northern Africa.** Algeria, Egypt, Morocco, Tunisia. **Western Asia.** Cyprus, Turkey.

Rostraria obtusiflora (Boiss.) Holub. *Folia Geobot. Phytotax.*, 9 (3): 271 (1974).

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

Basionym or Replaced Name: *Koeleria obtusiflora* Boiss., *Diagn. Ser.* 1.7: 121 (1846).

Illustrations (Books): N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 258 as *Lophochloa*), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (352, Pl. 133 as *Lophochloa*).

Derivation (Clifford & Bostock 2007): L. *obtusus*, blunt; *flos*, flower. Glume or lemma apices rounded.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 20–45 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane. Leaf-blades convolute, 7–15 cm long, 2–3 mm wide, glaucous. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear or lanceolate, 3–7 cm long, 0.5–1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets, similar to fertile lemma in texture, shiny, gaping. Lower glume lanceolate, 2–2.5 mm long, 0.66 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex acute. Upper glume ovate, 3–3.5 mm long, 0.75 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume lateral veins ribbed. Upper glume surface glabrous. Upper glume apex acute.

Florets. Fertile lemma obovate, 4 mm long, membranous, much thinner on margins, keeled, 5 -veined, more than 3-veined. Lemma lateral veins ribbed. Lemma surface glabrous. Lemma apex dentate, 2 -fid, obtuse, muticous or mucronate. Palea gaping, hyaline. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3. Ovary glabrous.

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

Country /Province /State. Northern Africa. Egypt. Middle Asia, Western Asia. Turkmenistan, Uzbekistan. Afghanistan, Cyprus, Iran, Iraq, Lebanon-Syria, Sinai.

Rostraria pumila (Desf) Tsvelev. *Novosti Sist. Vyssh. Rast.*, 7: 48 (1970).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (as *Lophochloa*), T.G.Tutin et al, *Flora Europaea* 5 (1980) (as *Lophochloa*).

Basionym or Replaced Name: *Avena pumila* Desf., *Fl. Atlant.* 1: 103 (1798.). T:<Type of Basionym>; fide TROPICOS and Kew Synonymy Database: LT: *Broussonet* 296, 1806, Morocco (LE). LT designated by ?; cited by Henderson & Schdfer, *Bot. J. Linn Soc.* 141: 130 (2003).

Recent Synonyms: *Lophochloa pumila* (Desf.) Bor, *Grasses Burma, Ceyl., Ind. & Pakist.* 445 (1960).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (187, Fig. 109 as *Trisetaria*), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (84, Fig. 55, as *Trisetaria*), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (204, Fig. 126 as *Lophochloa*), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 259 as *Lophochloa*), L.Boulos, *Flora of Egypt* 4 (2005), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (355, Pl. 134 as *Lophochloa*), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982) (517, Fig. 59), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (252, Fig. 194), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (360).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): L. dwarf, low growing. Habit typically depauperate.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 5–35 cm long, 1–4 -noded. Ligule an eciliate membrane, 1–1.5 mm long, obtuse. Leaf-blades 3–7 cm long, 1–3 mm wide, flaccid. Leaf-blade surface glabrous to hirsute. Leaf-blade apex obtuse or abruptly acute, hardened.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong or ovate, continuous or interrupted, 1–6 cm long, 0.4–0.5 cm wide. Panicle axis glabrous or puberulous. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 4 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, laterally compressed, 2.5–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pilose.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture, gaping. Lower glume elliptic, 2.5–3 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume surface villous. Lower glume apex acute. Upper glume elliptic, 2.5–3 mm long, 0.75 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliolate. Upper glume surface glabrous or villous. Upper glume apex acute.

Florets. Fertile lemma elliptic, 3–3.5 mm long, membranous, much thinner on margins, keeled, 5 -veined, more than 3-veined. Lemma midvein scaberulous. Lemma surface glabrous. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.75 way up back of lemma, 2–3 mm long overall. Palea gaping, 0.5–0.66 length of lemma, hyaline. Palea keels scaberulous. Rhachilla extension villous, with 1 mm long hairs.

Flower and Fruit. Anthers 3, 0.3 mm long. Ovary glabrous.

$n = 7$ (1 ref TROPICOS).

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

Region. Northern Europe (*), Southwestern Europe.

Country /Province /State. : GB Aliens (Ryves et al). : Spain. **Northern Africa, Macaronesia, West Tropical Africa, Southern Africa** (*). Algeria, Egypt, Libya, Morocco, Tunisia. Canary Is, Cape Verde, Madeira. Northern Cape, Western Cape. **Western Asia, Arabian Peninsula.** Afghanistan, Iran, Iraq. Gulf States, Kuwait, Oman, Saudi Arabia. **Indian Subcontinent.** India, Pakistan. **Australia** (*). Western Australia (*), South Australia (*), New South Wales (*), Victoria (*).

Eremean, South-West. NW & Lake Eyre, Southern. Western Slopes, Western Plains.

Rostraria rohlfsii (Aschers.) Holub. *Folia Geobot. Phytotax.*, 9 (3): 272 (1974).

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

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Gerhard Rohlfs (1831–1896) German traveller and collector in Africa.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms erect or geniculately ascending, 15–30 cm long, 2–5 -noded. Leaf-sheaths pubescent. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades 2–10 cm long, 1.5–3 mm wide, flaccid. Leaf-blade surface pubescent. Leaf-blade apex abruptly acute, hardened.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear or lanceolate, 3–10 cm long, 0.6–1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5–1 mm long.

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 or obovate, laterally compressed, 4–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, reaching apex of florets, similar to fertile lemma in texture, gaping. Lower glume lanceolate, 3–3.5 mm long, 0.75 length of upper glume, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume surface pubescent. Lower glume apex acuminate. Upper glume elliptic, 4–5 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume surface glabrous. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–4 mm long, membranous, much thinner on margins, keeled, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma midvein scabrous. Lemma surface asperulous, glabrous. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.8 way up back of lemma, 1–3 mm long overall. Palea gaping, hyaline. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.5–0.7 mm long. Ovary glabrous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northern Africa. Algeria, Egypt, Libya, Tunisia.

Rostraria salzmannii (Boiss. & Reut.) Holub. *Folia Geobot. Phytotax.*, 9 (3): 272 (1974).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, T.G.Tutin et al, *Flora Europaea* 5 (1980) (as *Lophochloa*).

Basionym or Replaced Name: *Rostraria salzmannii* Boiss., *Pugill.* 123 (1852).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Philipp Salzmann (1781–1851) German-born physician, naturalist and traveller.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 5–30 cm long. Leaf-sheaths pilose. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades 2–10 cm long, 1–7 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear or lanceolate, continuous or interrupted, 2–8 cm long, 0.7–2 cm wide. Panicle axis pubescent. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent. Floret callus pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, gaping. Lower glume elliptic, 4–6 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein pectinately ciliate. Lower glume lateral veins absent. Lower glume surface pilose. Lower glume apex acuminate. Upper glume elliptic, 4–6 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 elliptic, 4–6 mm long, membranous, much thinner on margins, keeled, 5 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn subapical, 1.7–2.5 mm long overall. Palea gaping, 0.8 length of lemma, hyaline. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3. Ovary glabrous.

Distribution (TDWG). Continent. Europe, Africa.

Region. Northern Europe (*), Southwestern Europe.

Country /Province /State. : GB Aliens (Ryves et al). : Spain. **Northern Africa.** Libya.

Rostraria trachyantha (Phil.) Soreng. *Contr. U. S. Natl. Herb.* 48: 604 (2003).

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 Grasses* (2006).

Recent Synonyms: *Koeleria trachyantha* Phil, *Fl. Atac.* 55. (1860).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. *trachys*, rough; *anthos*, flower. Lemmas scabrid.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms erect, 20–70 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 3–6 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Peduncle glabrous. Panicle spiciform, linear or oblong, interrupted, loose, 6–7 cm long. Panicle axis pilose. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 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 obovate, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture, shiny, gaping. Lower glume lanceolate, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume oblong, 0.75 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 3–4 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma midvein ciliate. Lemma surface pubescent, with tubercle-based hairs. Lemma apex truncate, awned, 1 -awned. Principal lemma awn subapical, 1.5–2 mm long overall. Palea gaping.

Flower and Fruit. Lodicules 2, membranous. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. **Western South America, Southern South America.** Peru. Chile North, Chile Central.

Tarapaca, Antofagasta, Atacama, Coquimbo. Tarapaca, Antofagasta, Atacama. Coquimbo, Valparaiso.

Rottboellia cochinchinensis (Lour.) Clayton. *Kew Bull.*, 35(4): 817: (1981).

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 Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (as *R. exaltata*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987) (as *R. exaltata*), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Vietnam. **Basionym or Replaced Name:** *Stegosia cochinchinensis* Lour., *Fl. Cochinch.* 51 (1790). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Cochinchina,.

Recent Synonyms: *Rottboellia exaltata* (L.)L.f., *Nov. Gram. Gen.* :40 (1779).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 1, Aristidoideae a Pharoideae (2012) (536), H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (283, Fig. 219 as *R. exaltata*), W. Robyns (1929 and 1934). *Flora Agrostologique du Congo Belge et du Ruanda-Urundi*, I. Maydees et Andropogonees and II. Panicees. Bruxelles, Goemaere (67, Pl. 3 as *R. exaltata*), F.N.Hepper, *F.W.T.A.* 3(2) (1972) (508, Fig.461 as *R. exaltata*), R.M.Polhill, F.T.E.A., *Gramineae* 3(1982):854, Fig 203), G.V.Pope et al., *Flora Zambesiaca* 10, L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (521, Fig. 416 as *R. exaltata*), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (283, Fig. 180), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (221, Fig. 79 as *R. exaltata*), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (366, Fig. 152), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (269, Fig. 163), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (474, Fig. 186 as *R. exaltata*), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (754 as *R. exaltata*), C-C Hsu, *Taiwan Grasses* (1975) (686, Pl. 1476 as *R. exaltata*), N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (209, Fig. 13 as *R. exaltata*), K.M.Matthew, *Illustrations on the Flora of Tamilnadu Carnatic* (1982) (Pl. 926 & 927 as *R. exaltata*), H.J.Noltie, *The Grasses of Bhutan* (2000) (831, Fig. 63), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (117, Fig. 118), E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (83, Pl. 31 as *R. exaltata*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (361), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (364as *R. exaltata*), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (692), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (418, Fig. 368 as *R. exaltata*), S.A.Renno, *Gramineas de Bolivia* (1998) (621, Fig. 148), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (545, Fig. 198 as *R. exaltata*), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (511, Fig 193 as *R. exaltata*), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 196, Fig. 23 (2006)), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (145, Fig 22), R.Pilger, *Die Naturlichen Pflanzenfamilien* 14e (1940) (139, Fig. 76 as *R. exaltata*), S-L Chen et al, *Flora of China*, Illustrations, *Poaceae* (2007) (Fig. 897), G.G.Potgar, C.B.Salunkhe & S.R.Yadav, *Grasses of Maharashtra* (2012) (Fig 103).

Illustrations (Journals): *Ruizia* (13:457, Fig 62a-c (1993)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, G.G.Potgar, C.B.Salunkhe & S.R.Yadav, *Grasses of Maharashtra* (2012) (Pl. 25).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Cochinchina, now included in Laos and Cambodia.

Classification. Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Rottboelliinae.

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

Country /Province /State. Macaronesia, West Tropical Africa, West-Central Tropical Africa, Northeast Tropical Africa, East Tropical Africa, South Tropical Africa, Southern Africa, Western Indian Ocean. Cape Verde. Burkina, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Nigeria, Sierre Leone. Cameroon, Gabon, Bioko, DRC. Chad, Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, Mpumalanga, Swaziland, Kwazulu-Natal. Madagascar (*), Seychelles. **Arabian Peninsula, China, Eastern Asia.** Oman. China South Central, Hainan, China Southeast. Nansei-Shoto, Ogasawara-shoto, Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasiasia.** Bangladesh, Eastern Himalaya, India, Pakistan, Sri Lanka.

Andaman Is, Laos, Myanmar, Thailand, Vietnam. Java, Lesser Sunda Is, Philippines, Christmas I. New Guinea, Solomon Is. **Australia** (*). Northern Territory, Queensland, New South Wales. **Southwestern USA, South-central USA, Southeastern USA, Mexico**. California. Texas. Florida, Georgia, Louisiana. Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America**. Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Trinidad-Tobago. French Guiana, Surinam. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Southeast. Argentina Northwest.

Fujian, Guangdong, Guangxi, Zhejiang. Guizhou, Sichuan, Yunnan. Darjeeling, Bhutan, Sikkim. Assam, Meghalaya, Tripura. Andhra Pradesh, Bihar, Kerala, Karnataka. Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Uttah Pradesh, West Bengal. Himachal Pradesh, Jammu Kashmir. Darwin & Gulf. North, South East, Inland. Coast. Distrito Federal (*), Mato Grosso, Mato Grosso do Sul. Espirito Santo, Sao Paulo. Jujuy (*). Veracruz. Oaxaca. Campeche, Tabasco.

Rottboellia coelorachis Forst. f. *Prod.* 9. (1786).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Tanna. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Pacific, Tanna: Forster.

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. *koilos*, hollow; *rhachis*, backbone. The axes of the inflorescences are concave.

Classification. Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Rottboelliinae.

Habit, Vegetative Morphology. Annual. Culms 150–200 cm long. Ligule an eciliate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 15–30 cm long, 25–35 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, subtended by an inflated leaf-sheath. Peduncle widened at apex. Racemes 1, single, smoothly terete, unilateral, 10–16 cm long. Rhachis fragile at the nodes, subcylindrical and excavated, glabrous on margins, terminating in a sterile spikelet. Spikelet packing abaxial, regular. Rhachis internodes oblong, 7–9 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets sunken, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, fused to internode, united wholly, columnar, flattened, 5–7 mm long.

Sterile Spikelets. Companion sterile spikelets rudimentary or well-developed, containing empty lemmas, ovate, dorsally compressed, 1–6 mm long, deciduous with the fertile. Companion sterile spikelet glumes chartaceous or coriaceous, smooth, glabrous, obtuse, 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 oblong, dorsally compressed, gibbous, 5–7 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, indurate, 2-keeled. Lower glume apex obtuse. Upper glume ovate, chartaceous, 1-keeled. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, hyaline, acute. Fertile lemma ovate, hyaline, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute. Palea hyaline, without keels.

Flower and Fruit. Anthers 3.

Distribution (TDWG). **Continent.** Australasia, Pacific, South America.

Country /Province /State. **Australia** (*). Lord Howe-Norfolk Is. **Southwestern Pacific.** New Caledonia. **Western South America.** Colombia.

Rottboellia goalparensis Bor. *Indian Forest Rec.*, n. s. Bot., i. 100 (1938).

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 Synonymy Database: HT: *Das 10471*, Assam (?; IT: K).

Recent Synonyms: *Robynsiochloa goalparensis* Bor, *Indian Forest Rec.*, n. s. Bot., i. 100 (1938).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From Goalpara District, Assam.

Classification. Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Rottboelliinae.

Habit, Vegetative Morphology. Annual. Culms erect, 100–200 cm long, with prop roots. Lateral branches ample. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1–6 mm long. Leaf-blades linear or lanceolate, 50–100 cm long, 10–20 mm wide, stiff. Leaf-blade surface hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade margins spinulose. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, subtended by an inflated leaf-sheath. Peduncle antrorsely scabrous above, widened at apex. Racemes 1, single, arcuate, unilateral, 3–5 cm long. Rhachis fragile at the nodes, subcylindrical and excavated, 3 mm wide, glabrous on margins. Spikelet packing abaxial, regular. Rhachis internodes oblong, 4 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets sunken, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, fused to internode, united wholly, columnar, flattened.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas, orbicular, dorsally compressed, 1.5 mm long, deciduous with the fertile. Companion sterile spikelet glumes coriaceous, smooth, glabrous, emarginate, mucous. 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 ovate, dorsally compressed, gibbous, 5–5.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume ovate, 1 length of spikelet, indurate, 2-keeled, 7–9 -veined. Lower glume surface flat or concave. Lower glume apex obtuse. Upper glume ovate, chartaceous, 1-keeled. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 3.5 mm long, hyaline, 3 -veined, obtuse. Fertile lemma oblong, 2.5 mm long, hyaline, 1 -veined, 0–3 -veined, one-veined. Lemma apex obtuse. Palea hyaline, without keels.

Flower and Fruit. Anthers 3, 2 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Assam.
Assam.

Rottboellia paradoxa R. de Koning & M.S.M. Sosef. *Blumea*, 31(2): 306 (1986).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.V. Santos 8019*, 23 Oct 1976, Philippines: San Tomas (L).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): Gk. *para*, irregular; *doxa*, opinion. Different from the expected in regard to related species.

Classification. Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Rottboelliinae.

Habit, Vegetative Morphology. Perennial. Culms erect, 170 cm long. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliate membrane, 2.5 mm long. Leaf-blades 25–50 cm long, 8–16 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, smoothly terete, unilateral. Rhachis fragile at the nodes, subcylindrical and excavated, glabrous on margins, terminating in a sterile spikelet. Spikelet packing abaxial, regular. Rhachis internodes oblong. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets sunken, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, fused to internode, united below, oblong, flattened, 4–5.2 mm long, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas, ovate, dorsally compressed, 5 mm long, deciduous with the fertile. Companion sterile spikelet glumes indurate, 10-veined, glabrous, eciliate on margins or ciliolate on margins, 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 oblong, dorsally compressed, 7–7.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus base truncate, with central peg, attached transversely.

Glumes. Glumes dissimilar, with lower wider than upper, reaching apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, 2-keeled, wingless, 9–11 -veined. Lower glume surface convex, smooth. Lower glume apex acute. Upper glume ovate, gibbous, 1 length of adjacent fertile lemma, chartaceous, without keels, 9–11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 1 length of fertile lemma, hyaline, 1 -veined, without lateral veins, acute. Fertile lemma gibbous, membranous, 3 -veined, 0–3 -veined. Lemma apex acute. Palea hyaline, without keels.

Flower and Fruit. Anthers 3, 3–4 mm long. Stigmas 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Rottboellia purpurascens Robyns. *Fl. Agrost. Congo Belge*, 66 (1929).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Vanderyst 1325*, Zaire (BR).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (282, Fig. 217 as *Robynsiochloa*).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3139 (1930)).

Derivation (Clifford & Bostock 2007): *L. purpurasco*, become purple. Foliage reddish-purple.

Classification. Subfamily Panicoideae. Tribe: Sacchareae. Subtribe Rottboelliinae.

Habit, Vegetative Morphology. Annual. Culms robust, 100–160 cm long, with prop roots. Culm-nodes pubescent. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades 25–55 cm long, 4–19 mm wide. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, subtended by an inflated leaf-sheath. Peduncle widened at apex. Racemes 1, single, unilateral, 4–13 cm long. Rhachis fragile at the nodes, subcylindrical and excavated, 5 mm wide, glabrous on margins. Spikelet packing abaxial, regular. Rhachis internodes oblong, 2.5–4 mm long. Rhachis internode tip transverse, crateriform, with simple rim. Spikelets sunken, in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, fused to internode, united below, oblong, flattened.

Sterile Spikelets. Companion sterile spikelets well-developed, male, ovate to cuneate, dorsally compressed, 3–5 mm long, deciduous with the fertile. Companion sterile spikelet glumes chartaceous, smooth, glabrous, 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 oblong, dorsally compressed, gibbous, 3–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus glabrous, base truncate, with central boss, attached transversely.

Glumes. Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, indurate, 2-keeled, winged on keel, winged narrowly, winged above, 12–16 -veined.

Lower glume apex emarginate. Upper glume ovate, chartaceous, 1-keeled, winged on keel, winged above. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 3.5 mm long, hyaline, 3 -veined, acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma ovate, 3.5 mm long, hyaline, 1 -veined, 0–3 -veined, one-veined. Lemma apex acute. Palea 0.5 length of lemma, hyaline, without keels.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West Tropical Africa, West-Central Tropical Africa, South Tropical Africa. Guinea, Sierre Leone. DRC. Zambia.

Rupichloa acuminata (Renvoize) Salariato & Morrone. *Taxon* 58: 389 (2009).

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 Grasses* (2006) (as *Streptostachys*).

TYPE from Brazil. **Basionym or Replaced Name:** *Streptostachys acuminata* Renv., *Kew Bull.* 39(1): 182 (1984)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.M. da Carvalho, G.P. Lewis & J.L. Hage 1007 bis, 19 Dec 1981, Brazil: Bahia: estrada de Lençois, BR-242, 5 km ao N de Lençois (CEPEC; IT: K, SI (fragm. & photo ex CEPEC)).

Recent Synonyms: *Brachiaria tatianae* F.O. Zuloaga & T.R. Soderstrom, *Smithsonian Contrib. Bot.*, 59: 7 (1985). *Urochloa acuminata* (Renvoize) O. Morrone & F. Zuloaga, *Ann. Missouri Bot. Gard.*, 78(2): 372: (1991).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (182, Fig. 68 as *Streptostachys*).

Derivation (Clifford & Bostock 2007): *L. acumen*, sharp point; *-ata*, possessing. Leaf-blades acute.

Classification. Subfamily Panicoideae. Tribe: Paniceae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, robust, 180–200 cm long. Culm-internodes terete. Culm-nodes pallid. Ligule a fringe of hairs or absent. Leaf-blade base cordate. Leaf-blades linear, 27–35 cm long, 15 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 25 cm long. Primary panicle branches simple, 10–15 cm long. Panicle branches stiff. Spikelets in pairs. Fertile spikelets sessile and pedicelled. Pedicels present, linear, ciliate, hairy all along but hairs longer above, tip discoid.

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, 6 mm long, falling entire. Spikelet callus square. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 0.33–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface puberulous, hairy at apex.

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, puberulous, hairy at apex. Palea of lower sterile floret hyaline. Fertile lemma elliptic, 6 mm long, indurate, without keel. Lemma surface smooth or scaberulous, rough above. Lemma margins involute. Palea 1 length of lemma, indurate, without keels. Palea surface scaberulous.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 26$.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast, Brazil Southeast.

Bahia. Bahia. Minas Gerais.

Rupichloa decidua (Morrone & Zuloaga) D. Salariao & Morrone. *Taxon* 58(2): 389 (2009).

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 Grasses* (2006) (as *Brachiaria*).

TYPE from Brazil. **Basionym or Replaced Name:** *Urochloa decidua* Morrone & Zuloaga, *Novon* 6(3): 315, f. 3–5A–C (1996). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Bahia: Palmeiras, Pai Inácio, BR-242, 12.27S 41.28W, 1000–1060 m, 19 Nov 1983, erva em touceiras de 1 m de altura, frequente em campo rupestre, L.R. Noblick & A. Pinto 2792, HT: CEPEC-4911; IT: CEPEC-35263, MO-3304058 (photo, SI), SI.

Recent Synonyms: *Urochloa decidua* O. Morrone & F.O. Zuloaga, *Novon*, 6(3): 315 (1996).

Illustrations (Journals): *Novon* (6: 314 Fig. 3 (1996)).

Derivation (Clifford & Bostock 2007): L. falling off. Leaves or spikelets deciduous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe Melinidinae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms robust, 100–210 cm long, 2–4 mm diam., 20–45 -noded. Culm-internodes terete, thin-walled, 2.5–10 cm long, smooth, distally glabrous. Culm-nodes glabrous. Leaf-sheaths loose, longer than adjacent culm internode. Ligule a ciliolate membrane, 1.2–2 mm long. Collar glabrous. Leaf-blades persistent or deciduous at the ligule, linear or lanceolate, flat or involute, 7–10(–12) cm long, 2–5(–10) mm wide. Leaf-blade surface glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Peduncle 3–18 cm long, glabrous. Racemes 6–20, borne along a central axis, 6–12 cm long. Rhachis angular, 0.3 mm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear, angular, 1.2–3 mm long, scaberulous, ciliate, hairy at tip.

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, 4.4–4.8 mm long, 1.6–1.8 mm wide, falling entire. Spikelet callus square. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 3.2–4 mm long, 0.5–0.66 length of spikelet, membranous, without keels, 7 -veined. Lower glume surface pilose, hairy at apex. Lower glume apex acute. Upper glume elliptic, 3.6–4 mm long, 0.9 length of spikelet, membranous, without keels, 7 -veined.

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. Palea of lower sterile floret hyaline, 1 length of lemma. Fertile lemma elliptic, gibbous, 3.6–4 mm long, 1.5–1.6 mm wide, indurate, without keel. Lemma surface rugose. Lemma margins involute. Lemma apex laterally pinched and pubescent. Palea 1 length of lemma, indurate, without keels. Palea surface rugose.

Flower and Fruit. Lodicules 2, 0.5 mm long. Anthers subglobose, 2.4–2.8 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.
Bahia.

Rytidosperma alpicola (Vickery) Connor & Edgar. *New Zealand J. Bot.* 17: 331 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia alpicola* Vickery, *Contr. New South Wales Natl. Herb.* 1: 297 (1950). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Mueller s.n.*, Australia: Victoria: Mt. Buller (MEL; ILT: K). LT designated by Vickery, *Contr. New South Wales Herb.* 1: 297 (1950).

Recent Synonyms: *Austrodanthonia alpicola* (Vickery) H.P. Linder, *Telopea* 7(3): 270 (1997).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (526, Fig. 103 as *Danthonia*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (141), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *L. alpes*, high mountain; *-cola*, dweller. Growing on high mountains.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 10–30 cm long, 3–4 -noded. Culm-nodes glabrous. Leaf-sheaths longer than adjacent culm internode. Ligule a fringe of hairs. Leaf-blades conduplicate or involute, 5–10 cm long, 2–4 mm wide, coriaceous, stiff.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, lanceolate or ovate, 3–4 cm long, 2–2.5 cm wide. Panicle branches smooth or scabrous. 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 cuneate, laterally compressed, 12–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–17 mm long, 1 length of upper glume, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume lanceolate, 12–17 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 6–8 mm long, chartaceous, pallid, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma margins ciliate. Lemma apex lobed, 2 -fid, with lobes 3–5 mm long, incised 0.6 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 10–17 mm long overall, with twisted column. Column of lemma awn 2–3 mm long. Lateral lemma awns present, arising on apex of lobes. Palea lanceolate, 5.5–7 mm long. Palea keels ciliate, adorned above. Palea surface pilose, hairy on flanks, hairy below. Palea apex emarginate or truncate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, yellow. Caryopsis with adherent pericarp, oblong, 2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria. Tablelands.

Rytidosperma auriculatum (J.M. Black) Connor & Edgar. *New Zealand J. Bot.* 17: 322 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia auriculata* J.M. Black, *Trans. & Proc. Roy. Soc. South Australia* 53: 261 (1929). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *J.M. Black* 2, 11 Nov 1927, Australia: South Australia: Bundaleer Hills (K; ILT:: MEL). LT designated by Vickery, *Contr. New South Wales Herb.* 2: 309 (1956).

Recent Synonyms: *Austrodanthonia auriculata* (J.M. Black) H.P. Linder, *Telopea* 7(3): 270 (1997).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (28, Fig. 221), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (536, Fig. 105 as *Danthonia*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (141), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *L. auris*, ear; *-ula*, diminutive; *-ata*, possessing. The apex of the lemma two-lobed.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 15–50 cm long, 3 -noded. Culm-nodes glabrous. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades flat or involute, 2–10 cm long, 2 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, dense, 4 cm long, 2.5 cm wide, bearing few spikelets. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate.

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 cuneate, laterally compressed, 9–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–1 mm long, pubescent.

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, much thinner on margins, without keels, 9–11 -veined. Lower glume apex acuminate. Upper glume lanceolate, 9–16 mm long, 1.5 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 9–11 -veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 8 mm long, chartaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 5–6 mm long. Lemma apex lobed, 2 -fid, with lateral lobes bidentate (auriculate), with lobes 4 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 11–13 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 7–11 mm long. Palea oblong or ovate. Palea keels ciliate. Palea surface pilose, hairy on back or on flanks. Palea apex emarginate or truncate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1.5–2 mm long. Caryopsis with adherent pericarp, obovoid, 2 mm long. Embryo 0.6 length of caryopsis.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. **Australia, New Zealand** (*). New South Wales, A.C.T., South Australia, Victoria. New Zealand South I.

Southern. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma australe (Petrie) Clayton & Renvoize ex Connor & E. Edgar. *New Zealand J. Bot.*, 25: 166 (1987).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from New Zealand. **Basionym or Replaced Name:** *Triodia australis* Petrie, *Trans. & Proc. New Zealand Inst.* 22: 442 (1890). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *D. Petrie s.n.*, New Zealand: Mount Ida Range, Maniototo Co., ca. 3500 ft (WELT-40330).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (as *Erythranthera*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (66, Fig 12), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (265 as *Erythranthera*), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. of the south. From the south in general as from Africa, America, Europe or elsewhere.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, mat forming. Culms geniculately ascending or decumbent, 10–45 cm long. Ligule a fringe of hairs. Leaf-blades convolute, 5–15 cm long, 0.5–1 mm wide, stiff. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle, comprising 3–8 fertile spikelets. Panicle contracted, linear, 2–5 cm long, bearing few spikelets. Panicle branches capillary, pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1 mm long. Floret callus glabrous.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2.4–3.3 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume lanceolate, 2.4–3.3 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 2–2.5 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface glabrous, without hair tufts. Lemma apex dentate, 2 -fid, obtuse, mucous or mucronate. Principal lemma awn from a sinus. Palea keels smooth, ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp, ovoid, 0.7 mm long.

Distribution (TDWG). Continent. Australasia.
Country /Province /State. Australia, New Zealand. New South Wales, Victoria, Tasmania. New Zealand North I, New Zealand South I.
Tablelands.

Rytidosperma biannulare (Zotov) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 324 (1979).

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 Grasses* (2006), E. Edgar, & H. Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Notodanthonia biannularis* Zotov, *New Zealand J. Bot.* 1: 116 (1963)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: V.D. Zotov s.n., 28 Nov 1953, New Zealand: Waitangi Forest, Northland, roadside, abundant (CHR-85021).

Illustrations (Books): M.E. Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (311).

Images: E. Edgar & H.E. Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): L. *bi-*, two; *annulis*, ring; *-are*, pertaining to. The lemma bears two distinct rows of hairs.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms 40–85 cm long. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades involute, 15–30 cm long, 1–2 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 10–20 cm long. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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 cuneate, laterally compressed, 7.6–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3–0.4 mm long. Floret callus evident, 0.5–0.7 mm long, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7.6–11 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume lanceolate, 7.6–11 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 6–7.5 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface pubescent, with 2 transverse rows of hair tufts. Lemma margins ciliate. Lemma apex lobed, 2 -fid, with lobes 4–5 mm long, incised 0.66 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6–12.5 mm long overall, with twisted column. Column of lemma awn 2.5–3 mm long. Lateral lemma awns present, arising on apex of lobes. Palea 2.5–4 mm long. Palea keels ciliate. Palea surface pilose, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.8–1.5 mm long. Caryopsis with adherent pericarp, 1.7–1.9 mm long.

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

Country /Province /State. New Zealand. New Zealand North I, New Zealand South I. Northwest USA, Southwestern USA. Oregon (*). California (*).

Rytidosperma bipartitum (Kunth) A.M. Humphreys & H.P. Linder. *Ann. Mo. Bot. Gard.* 97 (3): 358 (2010).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Rytidosperma linkii*), U. Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D. Sharp, D. & B.K. Simon, *AusGrass* (2002) (as *Austrodanthonia*).

Basionym or Replaced Name: *Avena bipartita* Link, *Hort. Berol.* 1: 113 (1827). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: (B).

Recent Synonyms: *Austrodanthonia bipartita* (Link) H.P. Linder, *Telopea* 7(3): 270 (1997). *Rytidosperma linkii* (Kunth) Connor & Edgar, *New Zealand J. Bot.* 17: 332. 1979, nom. illeg.

Notodanthonia linkii (Kunth) Veldkamp, *Taxon* 29: 296. 1980, nom. illeg.

Illustrations (Books): C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (55 & 59, Pl. 14 & 15 as *Danthonia*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (526, Fig. 103 as *Danthonia linkii* var. *fulva* and *linkii*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (142), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. bis*, twice; *partia*, divide. Lemma apex bifid.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–70 cm long, 1 mm diam., 4-noded. Leaf-sheaths smooth. Ligule a fringe of hairs. Leaf-blades flat or involute, 20–30 cm long, 1–2.5 mm wide. Leaf-blade surface glabrous or hirsute, sparsely hairy.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, lanceolate or ovate, 4–12 cm long. Primary panicle branches 2–4 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 8–13 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex attenuate. Upper glume elliptic, 8–13 mm long, 1–1.5 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, 8–9 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent, with a transverse row of hair tufts. Lemma hairs 4–5 mm long. Lemma apex lobed, 2 -fid, with lobes 5 mm long, incised 0.6 of lemma length, attenuate, awned, 3 -awned. Principal lemma awn from a sinus, curved, reflexed, 7–11 mm long overall, without a column. Lateral lemma awns present, arising on apex of lobes, 2–3 mm long. Palea lanceolate or elliptic, 4.5 mm long. Palea keels ciliolate. Palea surface villous, hairy on back or on flanks, hairy below. Palea apex acute. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1–2 mm long, yellow or orange. Caryopsis with adherent pericarp, obovoid, 1.75 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, Queensland, Victoria.

Southern. South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma acerosum (Vickery) Connor & Edgar. *New Zealand J. Bot.* 17: 331 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia acerosa* Vickery, *Contr. New South Wales Natl. Herb.* 1: 296 (1950). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Western Australia: Woorooloo, Dec 1907, *Koch* 1826 (HT: NSW-2596; IT: K).

Recent Synonyms: *Austrodanthonia acerosa* (Vickery) H.P. Linder, *Telopea* 7(3): 270 (1997).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. acer*, sharp; *-osa*, abundance. Lemmas terminating in a sharp point.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–70 cm long, 4 -noded. Culm-nodes glabrous. Leaf-sheaths scaberulous. Ligule a fringe of hairs. Leaf-blades filiform, involute, 5–15 cm long, 1–2 mm wide. Leaf-blade surface ribbed, glabrous or hirsute, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 3–8 cm long. Panicle branches pubescent or pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent.

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 cuneate, laterally compressed, 15–25 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, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 15–25 mm long, 1 length of upper glume, membranous, purple, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 15–25 mm long, 2.5 length of adjacent fertile lemma, membranous, purple, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 6–8.5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 3–4 mm long. Lemma apex lobed, 2 -fid, with lobes 3–5 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 13–18 mm long overall, with twisted column. Column of lemma awn 6 mm long. Lateral lemma awns present, arising on apex of lobes, 7 mm long. Palea linear or oblong, 3 mm long. Palea keels ciliate. Palea apex emarginate or obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia. South-West.

Rytidosperma bonthainicum (Jans.) Veldkamp. *Reinwardtia* 12:139 (2004).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austranthonia*), J.F.Veldkamp, *Poaceae* ms (*Flora Malesiana*).

TYPE from Indonesia. **Basionym or Replaced Name:** *Danthonia pilosa* var. *bonthainica* Jansen, *Reinwardtia* 2(2): 258 (1953). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: H.A.B. Bünnemeijer 11971, 8 Jun 1921, Indonesia: Sulawesi: Sulawesi Selatan: Bonthaim, Gunung, 2500 m (BO; IT: L).

Recent Synonyms: *Danthonia pilosa* var. *bonthainica* Jansen, *Reinwardtia* 2:258 (1953).

Illustrations (Books): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1523, Pl. 224 as *Danthonia pilosa*).

Derivation (Clifford & Bostock 2007): L -ica, belonging to. From Bonthain in the Celebes, Indonesia.

Classification. Subfamily Danthonioidae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms 12–50 cm long. Ligule a fringe of hairs. Leaf-blades deciduous at the ligule, 3–15 cm long, 0.4–0.8 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle, comprising 3–13 fertile spikelets. Peduncle glabrous. Panicle contracted, 2–6 cm long. Panicle axis pilose. Panicle branches pilose. 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 laterally compressed, 6.5–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet (tips of upper lemma and awns protruding). Lower glume 6–9 mm long, 1 length of upper glume. Lower glume surface glabrous. Upper glume 6–9 mm long, 1.2 length of adjacent fertile lemma, 0.9 length of spikelet. Upper glume surface glabrous.

Florets. Fertile lemma 5–6.5 mm long. Lemma surface with marginal hair tufts, bearing 4 hair tufts in all. Lemma hairs 1.25–1.5 mm long. Lemma apex lobed, 2 -fid, with lobes 2–3 mm long, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7–10 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 1.5–3.5 mm long. Palea surface glabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 1–1.5 mm long, eventually exserted. Caryopsis with adherent pericarp.
Distribution (TDWG). **Continent.** Tropical Asia.
Country /Province /State. **Malesia.** Sulawesi.

Rytidosperma buchananii (Hook.f.) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 320 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Danthonia buchananii* Hook. f., *Handb. N. Zeal. Fl.* 333 (1864). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Middle Island: Otago lake district, *Hector & Buchanan s.n.* (HT: K).

Recent Synonyms: *Notodanthonia buchananii* (Hook. f.) Zotov, *New Zealand J. Bot.* 1 110 (1963).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Classification. Subfamily Danthonioidae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 7–30 cm long. Leaves mostly basal. Ligule a fringe of hairs. Leaf-blades filiform, involute, 5–10 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence a panicle, comprising 4–12 fertile spikelets. Panicle contracted, linear, 2–5 cm long, bearing few spikelets. Panicle branches scaberulous. 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 cuneate, laterally compressed, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–8 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 6–8 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 3 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface glabrous, with marginal hair tufts, bearing 4 hair tufts in all. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, straight or curved, 4–6 mm long overall, without a column. Lateral lemma awns present, arising on apex of lobes, 1 mm long. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). **Continent.** Australasia.

Country /Province /State. **New Zealand.** New Zealand North I, New Zealand South I.

Rytidosperma caespitosum (Gaudich.) Connor & Edgar. *New Zealand J. Bot.* 17: 325 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia caespitosa* Gaudich., *Voy. Uranie* 4: 408 (1826). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Guadichaud s.n.*, Australia: Western Australia: Shark's Bay (P; IT: BM, K).

Recent Synonyms: *Austrodanthonia caespitosa* (Gaudich.) H.P. Linder, *Telopea* 7(3): 271 (1997).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (288, Fig. 222), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (536, Fig. 105 as *Danthonia*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (142), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (52, Fig. 10), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (97: 357, Fig.19 (2010)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.O.Mallett (ed.). *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*;

Derivation (Clifford & Bostock 2007): *L. caespes*, grass that has been cut; -osa, abundance. Habit tufted.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–90 cm long, 2–4 -noded. Culm-nodes glabrous. Leaf-sheaths hirsute, with tubercle-based hairs. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades flat or involute, 15–35 cm long, 1–2(–4) mm wide. Leaf-blade surface glabrous or hirsute.

Inflorescence. Inflorescence a panicle, comprising 10–30 fertile spikelets. Panicle contracted, linear or lanceolate, 3–13 cm long. Panicle branches smooth or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 4–9 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 cuneate, laterally compressed, 14–24 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75–1.5 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 14–24 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume lanceolate, 14–24 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 8–10 mm long, chartaceous, pallid, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 4–5 mm long. Lemma apex lobed, 2 -fid, with lobes 4 mm long, incised 0.5–0.66 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 15–25 mm long overall, with twisted column. Column of lemma awn 2–7 mm long. Lateral lemma awns present, arising on apex of lobes, 6–8 mm long. Palea lanceolate, 4.5–5 mm long. Palea keels ciliolate. Palea surface pilose, hairy on flanks. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.5–2 mm long, yellow. Caryopsis with adherent pericarp, oblongate or obovoid, 1.5 mm long.

Distribution (TDWG). **Continent.** Europe (*), Australasia, North America.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia, New Zealand** (*). New South Wales, A.C.T., South Australia, Tasmania, Victoria, Western Australia. New Zealand North I, New Zealand South I. **Southwestern USA.** California.

Ereman, South-West. NW & Lake Eyre, Southern. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma carphoides (F. Muell. ex Benth.) Connor & Edgar. *New Zealand J. Bot.* 17: 331 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia carphoides* F. Muell. ex Benth., *Fl. Austral.* 7: 592 (1878). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: Adamson 195, 2 Nov 1853, Australia: Melbourne: Victoria (K). LT designated by Vickery, *Contr. N.S.W. Herb.* 2: 277 (1956).

Recent Synonyms: *Austrodanthonia carphoides* (F. Muell. ex Benth.) H.P. Linder, *Telopea* 7(3): 271 (1997).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (289, Fig. 223), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (533, Fig. 104 as *Danthonia carphoides* var. *carphoides* & *angustior*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (142), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (52, Fig. 10), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.O.Mallett (ed.), *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*..

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Habit similar to that of *Carpha*..

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 10–40 cm long, 3 -noded. Culm-nodes glabrous. Leaf-sheaths pilose. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blades filiform, involute, 3–20 cm long, 1 mm wide. Leaf-blade surface ribbed, pilose, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Panicle contracted, ovate, 1.5–4 cm long, 1.5–2.5 cm wide, bearing few spikelets. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 6–9 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 5–9 -veined. Lower glume surface smooth or asperulous, rough on veins. Lower glume apex acute. Upper glume elliptic, 6–9 mm long, 1 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 5–9 -veined. Upper glume surface smooth or asperulous, rough on veins. Upper glume apex acute.

Florets. Fertile florets divergent. Fertile lemma elliptic, 6–8 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, with a transverse row of hair tufts. Lemma hairs 3–4 mm long. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, obtuse or acute, awned, 1 -awned. Principal lemma awn from a sinus, flexuous, 3–6 mm long overall, without a column. Lateral lemma awns absent. Palea obovate. Palea keels 2.3 mm apart, ciliolate. Palea surface pubescent, hairy on back, hairy below. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.5–1.5 mm long, pallid. Caryopsis with adherent pericarp, obovoid, 2 mm long. Embryo 0.5 length of caryopsis.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., South Australia, Tasmania, Victoria. Southern. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma clavatum (Zotov) Connor & Edgar. *New Zealand J. Bot.* 17: 326 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*).

TYPE from New Zealand. **Basionym or Replaced Name:** *Notodanthonia clavata* Zotov, *N. Zeal. Journ. Bot.* 1: 119 (1963). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: V.D. Zotov s.n., 12 Dec 1952, New Zealand: Upper Hutt, railway cutting (CHR-79778).

Recent Synonyms: *Austrodanthonia clavata* (Zotov) H.P. Linder, *Telopea* 7(3): 271 (1997).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): *L. clava*, club; *ata*, possessing. Panicle clavate.

Classification. Subfamily Danthonioideae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations extravaginal. Culms 45–90 cm long. Leaf-sheaths glabrous on surface or pilose. Leaf-sheath oral hairs bearded, 5 mm long. Ligule a fringe of hairs, 0.1–0.7 mm long. Leaf-blades flat or conduplicate, 15–30 cm long, 3–5 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Peduncle smooth or scaberulous above. Panicle contracted, linear, 3–5.5(–9.5) cm long. Primary panicle branches indistinct the panicle almost racemose. Panicle axis scabrous. Panicle branches bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, bearing a few hairs, hairy at tip.

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 cuneate, laterally compressed, 10–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3–0.4 mm long. Floret callus evident, 0.6–1.2 mm long, pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 8–13.5 mm long, 1 length of upper glume, membranous, without keels, (5–)7–9(–11) -veined.

Lower glume apex obtuse. Upper glume lanceolate, 8–13.5 mm long, 0.8–0.9 length of adjacent fertile lemma, membranous, without keels, 5–7(–9) -veined. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 8.5–16 mm long, chartaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with a transverse row of hair tufts or with marginal hair tufts (above, with or without additional dorsal tufts). Lemma apex lobed, 2 -fid, with lobes 6–13 mm long, incised 0.6–0.8 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 9–14 mm long overall, with a straight or slightly twisted column. Column of lemma awn 2.5–3 mm long. Lateral lemma awns present, arising on apex of lobes. Palea 3.5–5.5 mm long. Palea keels ciliolate. Palea surface glabrous or pilose, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.4–2.2 mm long. Caryopsis with adherent pericarp, 1.9–2.3 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. Chatham Is, New Zealand North I, New Zealand South I.

Rytidosperma clelandii (Vickery) Connor & Edgar. *New Zealand J. Bot.* 17: 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Rytidosperma*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia clelandii* Vickery, *Contr. New South Wales Natl. Herb.* 1: 297 (1950). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Cleland H262*, 30 Oct 1926, Australia: south Australia: Upper Waterfall Gully (NSW; IT: JBC).

Recent Synonyms: *Joycea clelandii* (Vickery) H.P. Linder, *Telopea*, 6(4): 612: (1996).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (302, Fig 237), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (40, Fig 8), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): in honor of John Burton Cleland (1878–1971) Australian medical pathologist and naturalist.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous. Culms 75 cm long, 3–4 -noded. Culm-nodes glabrous. Leaf-sheaths smooth or scaberulous. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades filiform, involute, 15–30 cm long, 0.75–2 mm wide. Leaf-blade surface ribbed, scabrous, rough adaxially.

Inflorescence. Inflorescence a panicle. Peduncle antrorsely scabrous above. Panicle open, lanceolate, 8–13 cm long. Panicle branches scabrous, glabrous in axils. 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 cuneate, laterally compressed, 16–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 16–20 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 9 -veined. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 16–20 mm long, 2 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 7 -veined. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 9 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, with marginal hair tufts, bearing 2 hair tufts in all. Lemma apex lobed, 2 -fid, with lobes 4 mm long, incised 0.5 of lemma length, acuminate, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 16 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 4 mm long. Palea oblanceolate, 8 mm long. Palea keels 1.5 mm apart, ciliate. Palea surface pubescent, hairy on back, hairy below. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 4.5 mm long, orange or red. Caryopsis with adherent pericarp, obovoid, 1.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. South Australia. Southern.

Rytidosperma corinum H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 317 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from New Zealand. **Basionym or Replaced Name:** *Rytidosperma corinum* Connor & Edgar, *New Zealand J. Bot.* 17(3): 317 (1979). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Zealand: Ahuriri River, North Otago, rock outcrop near disused bridge, ca. 650 m, 13 Jan 1978, H.E. Connor s.n. (CHR-318008).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): *L. corus*, north-west wind; *-inum*, belonging to. Growing on sites exposed to the north-west wind.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms 10–25 cm long. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades deciduous at the ligule, aciculate, involute, 7–15 cm long, 1 mm wide, stiff. Leaf-blade margins scabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle contracted, lanceolate, 2–6 cm long, bearing few spikelets. Panicle branches scaberulous, glabrous in axils or pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

Fertile Spikelets. Spikelets comprising 4–5(–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 cuneate, laterally compressed, 9–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.6–0.9 mm long. Floret callus evident, 0.4 mm long, pubescent.

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–)5(–7) -veined. Lower glume apex acute. Upper glume lanceolate, 9–11 mm long, 1.5–1.8 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 5–7.5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, with lobes 3–5 mm long, incised 0.6–0.7 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7–8.5 mm long overall, with twisted column. Column of lemma awn 2–2.5 mm long. Lateral lemma awns present, arising on apex of lobes. Palea 3.5–4 mm long. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.6–1 mm long, red. Caryopsis with adherent pericarp, 1.5–1.8 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand South I.

Rytidosperma craigii (Veldkamp) H.P. Linder. *Telopea*, 6(4): 613: (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*.

TYPE from New Guinea. **Basionym or Replaced Name:** *Danthonia craigii* Veldkamp, *Alpine Fl. New Guinea* 2: 1172, f. 378 (1979). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Veldkamp 6472*, 15 Apr 1975, New Guinea: West Sepik, Star Mts., -5 S Lat., 141.5 E Long., 3420 m. (L; IT: A, K, LAE, NSW).

Recent Synonyms: *Monostachya craigii* (Veldkamp) S.W.L. Jacobs, *Taxon* 31(4): 739 (1982).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): in honor of Barry William Charles Craig (1938–) Australian anthropologist.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, cushion forming. Basal innovations intravaginal. Culms 9–18 cm long. Leaf-sheaths smooth, glabrous on surface. Leaf-sheath oral hairs ciliate, 1–2.5 mm long. Ligule a fringe of hairs, 0.75 mm long. Leaf-blades straight or curved, deciduous at the ligule, filiform, involute, 6–10 cm long, 0.5–1 mm wide. Leaf-blade surface smooth, glabrous.

Inflorescence. Inflorescence a panicle, comprising 10–15 fertile spikelets. Peduncle glabrous. Panicle contracted, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 elliptic, laterally compressed, 8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5–0.66 mm long. Floret callus 0.3–0.4 mm long, pubescent, obtuse, disarticulating obliquely.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume oblong or ovate, 3.75–4.25 mm long, 1–1.2 length of upper glume, chartaceous, much thinner on margins, without keels, 2–3 -veined. Lower glume apex acute. Upper glume oblong or ovate, 3.5–3.6 mm long, 0.75 length of adjacent fertile lemma, chartaceous, with scarious margins, without keels, 2–3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 5 mm long, membranous, without keel, 7 -veined, more than 3-veined. Lemma surface smooth, with marginal hair tufts, bearing 2–4 hair tufts in all. Lemma hairs 0.6 mm long. Lemma apex entire, awned, 1 -awned. Principal lemma awn from a sinus, 4 mm long overall. Palea 2.75 mm long. Palea keels ciliolate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, obovate, 0.4 mm long, fleshy, ciliate. Anthers 3, 0.5–0.75 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuaasia. New Guinea.

Rytidosperma dendeniuae (Veldkamp) H.P. Linder. *Telopea*, 6(4): 613: (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from PNG. **Basionym or Replaced Name:** *Danthonia dendeniuae* Veldkamp, *Blumea* 38(1): 218 (1993)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.F. Veldkamp & P.F. Stevens 5846*, 6 Jul 1972, Papua New Guinea: New Guinea: Milne Bay, Suckling, -9.34 S Lat., 148.56 E Long., 3300 m (L).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): In honor of Goh Dendeniuae (fl. 1972) Papua-New Guinea botanist.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms 9–16 cm long. Ligule a fringe of hairs. Leaf-blades deciduous at the ligule, 5.5–11 cm long, 0.6–1 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence a panicle, comprising 4–5(–7) fertile spikelets. Peduncle pilose above. Panicle contracted, 1.5–2.5 cm long. Panicle axis pilose. Panicle branches pilose. 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 laterally compressed, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets (then only the awns protuding). Lower glume 6–8 mm long, 1 length of upper glume. Lower glume surface glabrous. Upper glume 6–8 mm long, 0.7 length of adjacent fertile lemma, 0.9–1 length of spikelet. Upper glume surface glabrous.

Florets. Fertile lemma 5–5.5 mm long. Lemma surface with marginal hair tufts, bearing 6 hair tufts in all. Lemma hairs 1–1.5 mm long. Lemma apex lobed, 2 -fid, with lobes 0–2.5 mm long, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 5.25–7 mm long overall, with twisted column. Lateral lemma awns present, 1–1.25 mm long. Palea surface pilose, hairy on margins (in two tufts). Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 0.75–1 mm long, eventually exserted. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.
Country /Province /State. Papuaia. New Guinea.

Rytidosperma diemenicum (D.I. Morris) A.M. Humphreys & H.P. Linder. *Ann. Mo. Bot. Gard.* 97 (3): 358 (2010).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia diemenica* D.I.Morris, *Muelleria* 7(2): 153–155, f. 5b, 6 (1989). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Tasmania: Ouse River-Wild Dog Plains, 1160 m, streambanks-sandy alluvium till, erosion sites, 7 Jan 1983, A. Moscal 1292 (HT: HO-65782).

Recent Synonyms: *Austrodanthonia diemenica* (D.I. Morris) H.P. Linder, *Telopea* 7(3): 271 (1997).

Illustrations: None found.

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 Van Diemens Land, now Tasmania.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Butt sheaths pallid, glossy. Culms 15–35 cm long, 4–5 -noded. Culm-internodes smooth. Leaf-sheaths ribbed, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute, 12–25 cm long, 2–3 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence a panicle, comprising 10–15 fertile spikelets. Peduncle scaberulous above. Panicle open, lanceolate or ovate, 3–5 cm long, bearing few spikelets. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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 cuneate, laterally compressed, (10–)12–15(–18) mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5 mm long. Floret callus pilose. Floret callus hairs 1–2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–18 mm long, 1 length of upper glume, membranous, purple, without keels, 3–5 -veined. Lower glume apex acute. Upper glume lanceolate, 10–18 mm long, membranous, purple, without keels, 3–5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 8–10.5 mm long, chartaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 2–4 mm long. Lemma apex lobed, 2 -fid, with lobes 3 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 11 mm long overall, with twisted column. Column of lemma awn 3–4 mm long. Lateral lemma awns present, 2–2.5 mm long. Palea elliptic, 4.5–6.5 mm long, thinner above. Palea keels ciliate. Palea surface glabrous or pilose, hairy on margins, hairy in the middle. Palea apex emarginate or truncate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy. Anthers 3, 1.25 mm long, yellow. Caryopsis with adherent pericarp, obovoid, 1.75–2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Tasmania.

Rytidosperma dimidiatum (Vickery) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia dimidiata* Vickery, *Contr. New South Wales Natl. Herb.* 2: 322 (1956). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Rodway s.n.*, Australia (HO).

Illustrations: None found.

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Classification. Subfamily Danthonioideae. Tribe: Danthoneieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, slender, 15–40 cm long, 2–4 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs. Leaf-blades involute, 2–12 cm long, 1–1.5 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence a panicle, comprising 4–20 fertile spikelets. Panicle contracted, linear or lanceolate, 2–6 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose or simple. Panicle branches pubescent. 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 cuneate, laterally compressed, 5–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 5–11 mm long, 1 length of upper glume, membranous, without keels, 7 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 5–11 mm long, 1.5 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acute or acuminate.

Florets. Fertile lemma oblong, 4.5–7 mm long, chartaceous, pallid, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, with lobes 2–4 mm long, incised 0.5 of lemma length, setaceously acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9 mm long overall, with twisted column. Column of lemma awn 4 mm long. Lateral lemma awns absent. Palea oblong, 2.5 mm long. Palea keels 0.8 mm apart, ciliolate, adorned above. Palea apex emarginate or obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1 mm long, yellow. Caryopsis with adherent pericarp, oblong, 1.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Victoria, Tasmania.

Rytidosperma duttonianum (Cashmore) Connor & Edgar. *New Zealand J. Bot.* 17: 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia duttoniana* Cashmore, *Comm. Austr., C.S.I.R., Bull.* 69(app.): 72, f.. 1932. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Cashmore Ga-65*, 2 Dec 1932, Australia: South Australia: Werribee (AD; ILT: K, NSW-19682). LT designated by Vickery, *Contr. New South Wales Herb.* 2(3): 304 (1956).

Recent Synonyms: *Austrodanthonia duttoniana* (Cashmore) H.P. Linder, *Telopea* 7(3): 271 (1997).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (291, Fig. 224), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (542, Fig. 106 as *Danthonia*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (143), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of J. Dutton (1863-) field assistant, Bathurst Agricultural Station, Australia.

Classification. Subfamily Danthonioideae. Tribe: Danthoneieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–80 cm long, 1–2 mm diam. Culm-nodes brown, glabrous. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades conduplicate, 10–20 cm long, 2–3.5 mm wide, glaucous. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–12 cm long, with spikelets clustered towards branch tips. Primary panicle branches 4–8 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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 cuneate, laterally compressed, 11–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75–1 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 10–18 mm long, 0.9 length of upper glume, membranous, much thinner on margins, without keels, 7 -veined. Lower glume apex acuminate. Upper glume elliptic, 11–20 mm long, 2 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 6–8 mm long, chartaceous, light brown, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 2–4 mm long. Lemma apex lobed, 2 -fid, with lobes 3–4 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 11–15 mm long overall, with twisted column. Column of lemma awn 4–6 mm long. Lateral lemma awns present, arising on apex of lobes, ascending or wrapped around principal, 3–4 mm long. Palea lanceolate or ovate. Palea keels ciliolate, adorned above. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 2 mm long, yellow or orange. Caryopsis with adherent pericarp, obovoid, 2.5 mm long. Embryo 0.5 length of caryopsis.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. South Australia, New South Wales, Victoria. Southern. Tablelands, Western Slopes, Western Plains.

Rytidosperma erianthum (Lindl.) Connor & Edgar. *New Zealand J. Bot.* 17: 323 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia eriantha* Lindl., *Three Exped. Australia* 2: 304 (1838). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Mitchell s.n.*, Australia: interior of New Holland, Major Mitchell's Expedition 1836, ex herb. Lindley (CGE(fragm., NSW-6960)).

Recent Synonyms: *Austrodanthonia eriantha* (Lindl.) H.P. Linder, *Telopea* 7(3): 271 (1997).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (291, Fig. 225), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (536, Fig. 105 as *Danthonia*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (63, Fig. 11), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.O.Mallett (ed.). *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*;

Derivation (Clifford & Bostock 2007): Gk. *erion*, wool; *anthos*, flower. With wooly glumes, lemmas or awns.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–70 cm long, 3 -noded. Culm-nodes glabrous. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule a fringe of hairs. Leaf-blades filiform, involute, 10–25 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle, comprising 4–15 fertile spikelets. Panicle contracted, lanceolate or ovate, 2–7 cm long, bearing few spikelets. Panicle branches pubescent or pilose. 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 cuneate, laterally compressed, 11–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 11–16 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 11–13 -veined. Lower glume apex acuminate. Upper glume lanceolate, 11–16 mm long, 1.2 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 11–13 -veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 10–12 mm long, coriaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 6–7 mm long. Lemma apex lobed, 2 -fid, incised 0.66 of lemma length, 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, 6 mm

long. Palea obovate. Palea keels ciliolate, adorned above. Palea surface glabrous or pilose, hairy on flanks. Palea apex emarginate or obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1.5–2 mm long, yellow or orange. Caryopsis with adherent pericarp, obovoid, 2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand (*). New South Wales, A.C.T., South Australia, Victoria. New Zealand South I.

Southern. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma exiguum H.P. Linder. *Telopea* 6: 614 (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Triodia exigua* Kirk, *Trans. & Proc. New Zealand Inst.* 14: 378 (1882). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *T. Kirk s.n.*, Feb 1881, New Zealand: Thomas River, Waimakariri (WELT-40227). LT designated by Zotov, *New Zealand J. Bot.* 1: 126 (1963).

Recent Synonyms: *Pyrrhanthera exigua* (T. Kirk) Zotov, *N. Zeal. Journ. Bot.* i. 126 (1963).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. wanting in size and number. Spikelets or inflorescence branches few.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, mat forming. Culms 4–20 cm long. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 1–8 cm long, 0.5–1 mm wide. Leaf-blade apex obtuse.

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

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 elliptic, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 5–7 mm long, 1 length of upper glume, membranous, without keels, 7–9 -veined. Lower glume apex acute. Upper glume ovate, 5–7 mm long, 1.5–2 length of adjacent fertile lemma, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 3.5 mm long, coriaceous, much thinner above, without keel, 9 -veined, more than 3-veined. Lemma midvein ciliate, hairy below. Lemma surface with marginal hair tufts, bearing 2 hair tufts in all. Lemma apex dentate, 3 -fid. Palea 1 length of lemma, 2 -veined. Palea keels ciliolate.

Flower and Fruit. Lodicules 2, cuneate, fleshy, ciliate. Caryopsis with free brittle pericarp. Embryo 0.2 length of caryopsis.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand South I.

Rytidosperma fortuneae-hibernae (Renvoize) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia fortuneae-hibernae* Renvoize, *Kew Bull.* 30(4): 596 (1975). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Tasmania grown at Kew from a sod collected on Mount Read in Jan 1972 by Lord Talbot de Malahide, (HT: K).

Illustrations (Books): K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (66, Fig 12), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. luck of the Irish. The type specimen was grown at Royal Botanic Gardens, Kew, from soil brought to England from Tasmania by Lord Talbot de Malahide (1912–1973) an Irish peer.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Butt sheaths papery. Culms erect or geniculately ascending, 20–38 cm long. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades 6–15 cm long, 1–2 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle contracted, oblong, 2–3.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 8–11 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, 8.3–11 mm long, 1 length of upper glume, membranous, purple, without keels, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 8–11 mm long, membranous, purple, without keels, 3–5 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 5–8 mm long, chartaceous, pallid, without keel, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma margins ciliate. Lemma apex lobed, 2 -fid, with lobes 3–5 mm long, setaceously acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6–10 mm long overall, with twisted column. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy. Anthers 3. Caryopsis with adherent pericarp, obovoid, 1.5 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Tasmania.

Rytidosperma fulvum (Vickery) A.M. Humphreys & H.P. Linder. *Ann. Mo. Bot. Gard.* 97 (3): 358 (2010).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Rytidosperma linkii*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austroanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austroanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia linkii* var. *fulva* Vickery, *Contrib. NSW Nat. Herb.* 1:299 (1950). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: New South Wales: Flemington, 31 Mar 1929, G.B. Vickery s.n. (HT: NSW-1573; IT: L).

Recent Synonyms: *Austroanthonia fulva* (Vickery) H.P. Linder, *Telopea* 7(3): 271 (1997).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (291, Fig. 226), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (as *Danthonia linkii* var. *linkii* & *fulva*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (143).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *L. brown*, deep yellow. Usually a reference to spikelet color.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 30–115 cm long. Ligule a fringe of hairs.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear or lanceolate. 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 cuneate, laterally compressed, 11.8–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 11.8–16 mm long, 1 length of upper glume, membranous, without keels. Lower glume apex attenuate. Upper glume elliptic, 11.8–16 mm long, 2 length of adjacent fertile lemma, membranous, without keels. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, 6–9 mm long, chartaceous, without keel, more than 3-veined. Lemma surface villous, with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, with lobes 5 mm long, incised 0.6–0.7 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate,

7.5–13.5 mm long overall, with a straight or slightly twisted column. Lateral lemma awns present, arising on apex of lobes, 1.6–3 mm long. Palea elliptic or ovate, 4.3–5.5 mm long. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.9–2 mm long. Caryopsis with adherent pericarp, obovoid, 1.8–2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., South Australia, Victoria. Southern. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma geniculatum (J.M. Black) Connor & Edgar. *New Zealand J. Bot.* 17: 323 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia geniculata* J.M. Black, *Trans. & Proc. Roy. Soc. South Australia* 53: 261 (1929). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *J.M. Black* 1, 23 Nov 1917, Australia: South Australia: Keith (AD; IK, MEL, NSW-1377, NSW-1378). LT designated by Vickery, *Contr. New South Wales Natl. Herb.* 2: 279 (1956).

Recent Synonyms: *Austrodanthonia geniculata* (J.M. Black) H.P. Linder, *Telopea* 7(3): 271 (1997).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (292, Fig. 227), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (533, Fig. 104 as *Danthonia*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (52, Fig. 10), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. genus*, knee; *-ulus*, diminutive. *-ata*, possessing. Plants with bent culms or awns.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, slender, 15–45 cm long, 3-noded. Leaf-sheaths smooth. Ligule a fringe of hairs. Leaf-blades filiform, involute, 7–20 cm long, 1 mm wide. Leaf-blade surface pubescent, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, comprising 3–15 fertile spikelets. Panicle contracted, ovate, 1–5 cm long, bearing few spikelets. Panicle branches pubescent. 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 cuneate, laterally compressed, 5–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 5–8 mm long, 1 length of upper glume, membranous, without keels, 7-veined. Lower glume apex acute. Upper glume oblong, 5–8 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 7-veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 6–7 mm long, chartaceous, without keel, 9-veined, more than 3-veined. Lemma surface pilose, without hair tufts. Lemma apex lobed, 2-fid, with lobes 4–6 mm long, incised 0.66 of lemma length, acuminate to setaceously acuminate, awned, 1-awned or 3-awned. Principal lemma awn from a sinus, geniculate, 4–6 mm long overall, not or scarcely exerted from spikelet, with a straight or slightly twisted column. Lateral lemma awns absent or present, arising on apex of lobes, 0–2 mm long. Palea obovate. Palea keels ciliolate. Palea surface pubescent, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.5–1 mm long. Caryopsis with adherent pericarp, oblong, 1 mm long, dark brown.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand (*). South Australia, Tasmania, Victoria. New Zealand South I. Southern.

Rytidosperma glabrum Steud. *Syn. Pl. Gram.* 425 (1855).

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

TYPE from Chile. **Basionym or Replaced Name:** *Danthonia glabra* Phil., *Anales Univ. Chile* 94: 30 (1896). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F. Philippi s.n.*, Feb 1879, Chile: in andibus provinciae Talca (SGO-PHIL-264; IT: BAA, SGO-45818, US-556463 (fragm. ex SGO-PHIL-264 & photo), US- (photo SGO-45818)).

Recent Synonyms: *Rytidosperma lechleri* Steud., *Syn. Pl. Gram.* 425 (1855).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (37, Fig 14).

Derivation (Clifford & Bostock 2007): L. smooth. Leaf-blades lacking hairs.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths yellow or purple. Culms erect, 5–20 cm long. Ligule a fringe of hairs, 0.4–0.5 mm long. Leaf-blades filiform, 0.5–6.5 cm long, 0.5–1 mm wide, stiff. Leaf-blade surface pilose, sparsely hairy or moderately hairy, hairy adaxially.

Inflorescence. Inflorescence a panicle, comprising 5–10 fertile spikelets. Panicle contracted, oblong, 4 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 6–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1–1.5 mm long, glabrous. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 6–9 mm long, 1 length of upper glume, membranous, purple, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 6–9 mm long, 1.1 length of adjacent fertile lemma, membranous, purple, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 5.5–7 mm long, chartaceous, purple, without keel, more than 3-veined. Lemma surface pilose, with 2 transverse rows of hair tufts. Lemma margins ciliate. Lemma hairs 1–2.5 mm long. Lemma apex lobed, 2 -fid, with lobes 3–4.5 mm long, incised 0.5–0.66 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 5–6.5 mm long overall, with a straight or slightly twisted column. Lateral lemma awns present, arising on apex of lobes, 1–1.5 mm long. Palea 2.5–3.5 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, fleshy, ciliate. Anthers 3, 0.4–0.5 mm long. Caryopsis with adherent pericarp, 1.5 mm long, dark brown. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South. Neuquén, Río Negro.

Rytidosperma gracile (Hook.f.) Connor & Edgar. *New Zealand J. Bot.* 17: 330 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from New Zealand. **Basionym or Replaced Name:** *Danthonia gracilis* Hook. f., *Fl. Nov.-Zel.* 1: 303, t. 69B (1853). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *D. Munro* 120, Feb 1851, New Zealand: Rotoiti Lake, Aglionby Plains (K). LT designated by Zotov, New Zealand J. Bot. 1: 123 (1963).

Recent Synonyms: *Notodanthonia gracilis* (Hook. f.) Zotov, *New Zealand J. Bot.* 1: 123 (1963)

Illustrations: None found.

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, E.Edgar & H.E.Connor, *Flora of New Zealand* 5, Gramineae (2000);.

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

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons absent or present. Basal innovations extravaginal. Culms 25–60 cm long, without nodal roots or rooting from lower nodes. Leaf-sheaths

glabrous on surface or pilose. Ligule a fringe of hairs, 0.2–1 mm long. Leaf-blades flat or involute, 10–25 cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle open, 5–10 cm long. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 3–4(–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 cuneate, laterally compressed, 9–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.6–1 mm long. Floret callus evident, 0.3–0.5 mm long, pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 7–12 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 7–12 mm long, 1.5 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume apex acute or acuminate.

Florets. Fertile lemma oblong, 4–7.5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent, with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, with lobes 2.5–4.5 mm long, incised 0.66 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 4.5–9 mm long overall, with a straight or slightly twisted column. Column of lemma awn 0.5–1.2 mm long. Lateral lemma awns present, arising on apex of lobes. Palea 2.5–4 mm long. Palea keels ciliate. Palea surface pilose, hairy on back or on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.5–1.3 mm long. Caryopsis with adherent pericarp, 0.9–1.4 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand. New South Wales, Tasmania. Chatham Is, New Zealand North I, New Zealand South I, Stewart Is.

Coast.

Rytidosperma horrens Connor & Molloy. *New Zealand J. Bot.* 43(3): 726 (figs. 3–4, 6) (2005).

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

TYPE from New Zealand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Zealand, Lake Okau: Molloy (CHR holo).

Illustrations: None found.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Basal innovations intravaginal. Culms erect, 6–12 cm long. Culm-internodes distally glabrous. Leaf-sheaths 1–1.5 cm long, ribbed, glabrous on surface. Leaf-sheath oral hairs ciliate, 1–1.5 mm long. Ligule a fringe of hairs, 0.25 mm long. Leaf-blades deciduous at the ligule, filiform, 2.5–3 cm long, 0.5 mm wide. Leaf-blade surface scaberulous, rough adaxially.

Inflorescence. Inflorescence a panicle or composed of racemes, comprising 2–5 fertile spikelets. Peduncle 4–6 cm long. Racemes 1, single, 1–1.7 cm long. Rhachis scaberulous on margins. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–5 mm long, scaberulous.

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, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3–0.5 mm long, glabrous. Floret callus 0.25 mm long, pilose, obtuse. Floret callus hairs 0.4–0.6 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 5–6 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 3 -veined. Lower glume lateral veins meeting at apex. Lower glume surface puberulous, hairy above. Lower glume apex acute. Upper glume ovate, 5–6 mm long, membranous, without keels, 5 -veined. Upper glume lateral veins meeting at apex. Upper glume surface puberulous, hairy above. Upper glume apex acute.

Florets. Fertile lemma ovate, 3.5–4.5 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma lateral veins meeting above. Lemma surface with marginal hair tufts, bearing 4 hair tufts in all. Lemma hairs 0.5–0.75 mm long. Lemma apex dentate, 2 -fid, with lobes 1.5–2.5 mm long, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, reflexed, 1.5–2.5 mm long overall, with twisted

column. Lateral lemma awns present, arising on apex of lobes, 1–1.5 mm long. Palea 2.5 mm long. Palea keels ciliate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.4–0.5 mm long, fleshy, veined, ciliate. Anthers 3, 0.7–1 mm long, yellow, anther tip apiculate. Caryopsis with adherent pericarp, obovoid, 1.4–1.5 mm long. Embryo 0.75 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand South I.

Rytidosperma indutum (Vickery) Connor & Edgar. *New Zealand J. Bot.* 17: 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia induta* Vickery, *Contr. New South Wales Natl. Herb.* 1(5): 298 (1950). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Ingram s.n.*, Dec 1938, Australia: New South Wales: Armidale (NSW-1344; IT: K).

Recent Synonyms: *Austrodanthonia induta* (Vickery) H.P. Linder, *Telopea* 7(3): 272 (1997). *Rytidosperma procerum* (Vickery) H.E. Connor & E. Edgar, *New Zealand J. Bot.*, 17(3): 33 (1979).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (293, Fig. 228), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (526, Fig. 103 as *Danthonia procera*), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (144 and 146, as *A. procera*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. induo*, clothe. Glumes and/or lemmas densely hairy.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms robust, 75–120 cm long, 2.5–3.5 mm diam., 4-noded. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades flat or involute, 15–30 cm long, 1.5–4 mm wide. Leaf-blade surface glabrous. Leaf-blade apex filiform.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear to elliptic, 9–18 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 14–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–2 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 14–18 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 5–7 -veined. Lower glume apex attenuate. Upper glume lanceolate, 14–18 mm long, 1.5 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 5–7 -veined. Upper glume apex attenuate.

Florets. Fertile lemma oblong, 10–11 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, with a transverse fringe of hair. Lemma hairs 4–5 mm long. Lemma apex lobed, 2 -fid, with lobes 6 mm long, incised 0.5 of lemma length, acuminate, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 13–18 mm long overall, with twisted column. Column of lemma awn 4–6 mm long. Lateral lemma awns present, arising on apex of lobes, 1–3 mm long. Palea lanceolate, 6–8 mm long. Palea surface villous, hairy on back or on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 2–3 mm long, orange. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, Queensland, South Australia, Tasmania, Victoria.

Central, South East. Tablelands, Western Slopes.

Rytidosperma irianense (Veldkamp) H.P. Linder. *Telopea*, 6(4): 614: (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from New Guinea. **Basionym or Replaced Name:** *Danthonia irianensis* J.F. Veldkamp, *Blumea* 38(1): 218 (1993). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Guinea, Carstensz: Hope ANU 10952 (L holo, BO, CANB).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *-ensis*. denoting origin. From Irian Jaya, Indonesia.

Classification. Subfamily Danthonioidae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms 16–30 cm long. Ligule a fringe of hairs. Leaf-blades persistent, 14–27 cm long, 0.5–1 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence a panicle. Peduncle glabrous. Panicle contracted, dense, 6.5–7.5 cm long, bearing many spikelets. Panicle axis pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 laterally compressed, 7.5–11 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, reaching apex of florets. Lower glume 1 length of upper glume. Upper glume primary vein ciliate or pubescent.

Florets. Fertile lemma 4.5–6.25 mm long. Lemma surface with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, with lobes 2–3.5 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 8.25–9.5 mm long overall, with twisted column. Lateral lemma awns present, 1–2 mm long. Palea surface pilose, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 0.75–1.25 mm long, eventually exerted. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuaasia. New Guinea West Papua (Irian Jaya). New Guinea.

Rytidosperma javanicum (Ohwi ex Veldkamp) H.P. Linder. *Telopea*, 6(4): 614: (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Indonesia. **Basionym or Replaced Name:** *Danthonia javanica* Ohwi ex Veldkamp, *Blumea* 38(1): 219 (1993)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.J. Afriastini* 264, 21 May 1981, Indonesia: Java: Jawa Tengah, Lawu, Gunung, 3100 m (L).

Illustrations: None found.

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

Classification. Subfamily Danthonioidae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms 13–60 cm long. Ligule a fringe of hairs. Leaf-blades deciduous at the ligule, 5–19 cm long, 0.4–1 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle, comprising 3–11 fertile spikelets. Peduncle glabrous. Panicle contracted, 2.5–9 cm long. Panicle axis pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 3–6(–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 laterally compressed, 10.5–14 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, reaching apex of florets (only the awns protruding). Lower glume 1 length of upper glume. Lower glume surface glabrous. Upper glume surface glabrous.

Florets. Fertile lemma 4.75–6.75 mm long. Lemma surface with marginal hair tufts, bearing 4 hair tufts in all. Lemma hairs 1–1.5 mm long. Lemma apex lobed, 2 -fid, with lobes 2–3 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, 8.5–11.5 mm long overall, with

twisted column. Lateral lemma awns present, 2.25–3.5 mm long. Palea present. Palea surface glabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 0.6–1.15 mm long, retained within floret or eventually exerted. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Java.

Rytidosperma laeve (Vickery) Connor & Edgar. *New Zealand J. Bot.* 17: 325 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia laevis* Vickery, *Contr. New South Wales Natl. Herb.* 1(5): 299 (1950). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australian Capitol Territory: Base of Mt. Stromlo, 26 Apr 1941, *Melvaine s.n.* (HT: NSW-3232).

Recent Synonyms: *Austrodanthonia laevis* (Vickery) H.P. Linder, *Telopea* 7(3): 272 (1997).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (293, Fig. 229), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (542, Fig. 106 as *Danthonia*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (63, Fig. 11), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (144), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): L. smooth. Lacking hairs or roughness, usually of leaf-blades or lemmas.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–60 cm long, 2–4 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or hirsute. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades filiform, involute, 10–20 cm long, 1–1.5 mm wide, stiff. Leaf-blade surface glabrous or hirsute, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, comprising 5–20 fertile spikelets. Peduncle smooth or scaberulous above. Panicle contracted, linear, 3–4 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose or simple. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent or ciliate.

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 cuneate, laterally compressed, 11–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 11–18 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume lanceolate, 11–18 mm long, 1.1–1.5 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Fertile florets divergent. Fertile lemma oblong, 10–12 mm long, chartaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with basal hair tufts near margin or with a transverse row of hair tufts. Lemma hairs 4–7 mm long. Lemma apex lobed, 2 -fid, with lobes 6–7 mm long, incised 0.6 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 11–28 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2–4 mm long. Palea lanceolate or oblanceolate, 5 mm long. Palea keels ciliate, adorned above. Palea apex emarginate or truncate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1.5–2 mm long, yellow. Caryopsis with adherent pericarp, obovoid, 2.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand (*). New South Wales, A.C.T., South Australia, Tasmania, Victoria. New Zealand North I, New Zealand South I.

Southern. Coast, Tablelands, Western Slopes.

Rytidosperma lechleri Steud. *Syn. Pl. Gram.* 425 (1855).

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 Grasses* (2006).

TYPE from Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Lechler* 782, Mar 1852, Chile: Valdivia: ad scatarigines in Cordillera de Ranco (P; IT: GOET, K, US- (fragm. ex P-STEUD-411), US- (fragm. ex B), US-1127091 (ex W), W).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 1, Aristidoideae a Pharoideae (2012) (232).

Derivation (Clifford & Bostock 2007): in honor of Willibeld Lechler (1814–1856) German apothecary and traveller who collected in South America.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 5–20 cm long. Ligule a fringe of hairs, 0.4–0.5 mm long. Leaf-blades filiform, convolute, 0.5–6.5 cm long, 1–2 mm wide, stiff. Leaf-blade surface pilose, hairy adaxially.

Inflorescence. Inflorescence a panicle, comprising 8–10 fertile spikelets. Panicle contracted, oblong, 4 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 6–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1–1.5 mm long. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 6–9 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 6–9 mm long, 1.1 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 5.5–7 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with 2 transverse rows of hair tufts. Lemma hairs 2–2.5 mm long. Lemma apex lobed, 2 -fid, with lobes 3–4.5 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 5–6.5 mm long overall, with a straight or slightly twisted column. Lateral lemma awns present, arising on apex of lobes, 1.5 mm long. Palea 2.5–3.5 mm long. Palea surface pubescent, hairy on back or on flanks. Palea apex truncate or obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, ciliate. Anthers 3, 0.4–0.5 mm long. Caryopsis with adherent pericarp, 1.5 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central, Chile South.

Mendoza, Chubut, Neuquén, Río Negro. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Coquimbo, Valparaiso, Santiago, Maule, Biobio, La Araucania. Los Lagos, Magellanes.

Rytidosperma lepidopodum (N.G. Walsh) A.M. Humphreys & H.P. Linder. *Ann. Mo. Bot. Gard.* 97 (3): 359 (2010).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Rytidosperma*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia lepidopoda* N.G. Walsh, *Muelleria* 7(3): 384 (1991). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Victoria: South Belgrave, Bullens Land Courtneys Rd, immediately N of Ash Reserve, 37,56.40S 145.20.45E, 15 Jan 1987, *Walsh 1709* (HT: MEL; IT: BRI, NSW).

Recent Synonyms: *Joycea lepidopoda* (N.G. Walsh) H.P. Linder, *Telopea*, 6(4): 612: (1996).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (as *Danthonia*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): Gk *lepis*, scale; *pous*, foot. Rhizomes clothed in scales.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes elongated, scaly. Culms 30–60 cm long. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute, 7–15 cm long, 1–2 mm wide. Leaf-blade surface glabrous or pubescent, sparsely hairy.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle open, linear or ovate, 5–8 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 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, 8–14 mm long, 1 length of upper glume, membranous, purple, without keels. Lower glume apex acute. Upper glume lanceolate, 8–14 mm long, membranous, purple, without keels. Upper glume apex acute.

Florets. Fertile lemma oblong, 6–9 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pilose, with a transverse row of hair tufts. Lemma apex lobed, 2 -fid, with lobes 3–5 mm long, awned, 1 -awned or 3 -awned. Principal lemma awn from a sinus, geniculate, 10–15 mm long overall, with twisted column. Column of lemma awn 2 mm long. Lateral lemma awns absent or present, 1–2 mm long. Palea lanceolate or oblong, 5–8 mm long. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Victoria.

Rytidosperma longifolium (R. Br.) Connor & Edgar. *New Zealand J. Bot.* 17: 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia longifolia* R. Br., *Prodr.* 176 (1810). T:<Type of Basionym>; *vide* TROPICOS and Kew Synonymy Database: HT: *Brown 6231*, Australia: New South Wales: Port Jackson (BM(fragm. PERTH); IT: K).

Recent Synonyms: *Notodanthonia longifolia* (R. Br.) J.F. Veldkamp, *Taxon*, 29(2–3): 296 (1980).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (533, Fig 104 as *Danthonia*), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (180 as *Danthonia*), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (as *Danthonia*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (43, Fig 9), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.O.Mallett (ed.). *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*;

Derivation (Clifford & Bostock 2007): *L. longus*, long; *folium*, leaf. With long leaf-blades.

Classification. Subfamily Danthonioideae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–75 cm long. Leaves mostly basal. Ligule a fringe of hairs. Leaf-blades curled, filiform, involute, 15–35 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 5–15 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 10–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 0.9 length of upper glume, scarious, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 10–11 mm long, 3 length of adjacent fertile lemma, scarious, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 3 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, with a transverse fringe of hair. Lemma hairs 4 mm long. Lemma apex lobed, 2 -fid, incised 0.2 of lemma length, attenuate, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 9–

11 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 6 mm long, shorter than principal. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, ciliate. Anthers 3, 1 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales, A.C.T., Victoria.

Central, South East. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma maculatum (Zotov) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 320 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Notodanthonia maculata* Zotov, *New Zealand J. Bot.* 1: 108 (1963). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: Anon. s.n., 1929, New Zealand: Galloway, Central Otago (CHR-3660).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Classification. Subfamily Danthonioidae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths thickened and forming a bulb. Basal innovations intravaginal. Culms erect or geniculately ascending, 15–30 cm long. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate, 1.5–2.5 mm long. Ligule a fringe of hairs, 0.4 mm long. Leaf-blades deciduous at the ligule, acuminate, involute, 6–12 cm long, 1 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins cartilaginous, scabrous.

Inflorescence. Inflorescence a panicle. Peduncle glabrous or pubescent above. Panicle contracted, 1–3.5 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Panicle axis scabrous. Panicle branches bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, bearing a few hairs, hairy at tip.

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 cuneate, laterally compressed, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5 mm long. Floret callus evident, 4 mm long, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 7–10 mm long, 1 length of upper glume, membranous, without keels, 7 -veined. Lower glume surface glabrous or pilose, hairy between veins. Lower glume apex obtuse. Upper glume lanceolate or ovate, 7–10 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume surface glabrous or pilose, hairy between veins. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 3.5–5.5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, with lobes 1.5–3 mm long, incised 0.4–0.5 of lemma length, awned, 1 -awned or 3 -awned. Principal lemma awn from a sinus, geniculate, 3–5 mm long overall, with twisted column. Column of lemma awn 1–1.5 mm long. Lateral lemma awns absent or present, arising on apex of lobes. Palea 3–5 mm long. Palea keels ciliate. Palea surface pilose, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.3–0.5 mm long. Caryopsis with adherent pericarp, 1.3–1.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand South I.

Rytidosperma mamberamense (Jansen) H.E. Connor & E.Edgar. *New Zealand J. Bot.*, 17(3): 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, *Poaceae* ms (*Flora Malesiana*).

TYPE from Iran Jaya. **Basionym or Replaced Name:** *Danthonia mamberamensis* Jansen, *Reinwardtia* 2(2): 259, f. 4 (1953)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *H.J. Lam 1682*, 21 Oct 1920, Indonesia: New Guinea: Irian Jaya: Doorman Mountain (L).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From Mamberamo River, West Irian, Indonesia.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 20–35 cm long, 3–5 -noded. Ligule a fringe of hairs. Leaf-blades filiform, involute, 22–35 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade margins scabrous. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle. Peduncle glabrous. Panicle open or contracted, lanceolate or oblong, 4–6 cm long. Primary panicle branches appressed or ascending, 2–3 -nate, whorled at lower nodes, 0.2–0.6 cm long. Panicle branches flexuous, glabrous. 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 obovate, laterally compressed, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 8–8.5 mm long, 1 length of upper glume, membranous, without keels, 5 -veined. Lower glume surface smooth, glabrous. Lower glume margins ciliate (above). Lower glume apex acute. Upper glume lanceolate, 8–8.5 mm long, 1.2–1.6 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume surface smooth, glabrous. Upper glume margins ciliate (above). Upper glume apex acute.

Florets. Fertile lemma ovate, 5–7 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with a transverse fringe of hair. Lemma margins scabrous. Lemma apex lobed, 2 -fid, with lobes 2.5–3 mm long, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, straight or geniculate, simple at base, 4.5–8.5 mm long overall, without a column or with a straight or slightly twisted column. Palea elliptic, 5–9 mm long. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 1.8–2.5 mm long. Caryopsis with adherent pericarp.

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

Country /Province /State. **Malesia, Papuaia.** New Guinea West Papua (Irian Jaya). New Guinea.

Rytidosperma merum Connor & Edgar. *New Zealand J. Bot.* 17: 328 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*).

TYPE from New Zealand. **Basionym or Replaced Name:** *Rytidosperma merum* Connor & Edgar

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *P.A. Williams s.n.*, Feb 1977, New Zealand: Elliot Stream, Marlborough, hollows amongst steep to rolling country, N. facing slopes (CHR-309413; IT: K).

Recent Synonyms: *Austrodanthonia mera* (Connor & Edgar) H.P. Linder, *Telopea* 7(3): 272 (1997).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): *L. naked*. The lower surface of the lemma is hairless.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations extravaginal or intravaginal. Culms 80–140 cm long. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.1–0.2 mm long. Leaf-blades flat, 10–40 cm long, 2–3 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle contracted, linear, 4–8 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, bearing a few hairs, hairy at tip.

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 cuneate, laterally compressed, 7–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5–0.6 mm long. Floret callus evident, 0.6–1 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–15 mm long, 1 length of upper glume, membranous, without keels, 5(–7) -veined. Lower glume apex obtuse. Upper glume lanceolate, 7–15 mm long, 1.3 length of adjacent fertile lemma, membranous, without keels, 5(–7) -veined. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 5.5–11.5 mm long, chartaceous, shiny, without keel, 7–9 -veined, more than 3-veined. Lemma surface glabrous, with marginal hair tufts, bearing 2 hair tufts in all or 4 hair tufts in all. Lemma apex lobed, 2 -fid, with lobes 3–7.5 mm long, incised 0.66 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6.5–14 mm long overall, with twisted column. Column of lemma awn 2.5–3.5 mm long. Lateral lemma awns present, arising on apex of lobes. Palea 2.5–5 mm long. Palea keels ciliolate. Palea surface glabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.3–1.5 mm long. Caryopsis with adherent pericarp, 1.7–2.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand North I, New Zealand South I.

Rytidosperma monticola (Vickery) Connor & Edgar. *New Zealand J. Bot.* 17: 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia monticola* Vickery, *Contr. New South Wales Natl. Herb.* 1(5): 299 (1950). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Vickery s.n.*, 2 Jan 1936, Australia: New South Wales: Lithgow (NSW-1359; IT: K).

Recent Synonyms: *Austrodanthonia monticola* (Vickery) H.P. Linder, *Telopea* 7(3): 272 (1997).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (536, Fig. 105), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (144), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. mons*, mountain; *-cola*, dweller. Growing on mountains.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–45 cm long, 2–3 -noded. Leaf-sheaths hirsute. Ligule a fringe of hairs. Leaf-blades involute, 7–15 cm long, 1–2 mm wide. Leaf-blade surface hirsute, sparsely hairy.

Inflorescence. Inflorescence a panicle, comprising 5–15 fertile spikelets. Panicle contracted, lanceolate or ovate, 1–4 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose or simple. Panicle branches pubescent. 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 cuneate, laterally compressed, 8–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–11 mm long, 1 length of upper glume, membranous, without keels, 9 -veined. Lower glume apex acuminate. Upper glume lanceolate, 8–11 mm long, 1.5–2 length of adjacent fertile lemma, membranous, without keels, 9 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 5–6 mm long, chartaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with 2 transverse rows of hair tufts. Lemma hairs 2–3 mm long. Lemma apex lobed, 2 -fid, with lobes 3 mm long, incised 0.5 of lemma length, acute, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6–7 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 3–4 mm long. Palea obovate. Palea keels ciliolate. Palea surface glabrous or pilose, hairy on back, hairy below. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1 mm long, yellow. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria.
Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma montis-wilhelmii (Veldkamp & Fortuin) H.P. Linder. *Telopea*, 6(4): 614: (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from New Guinea. **Basionym or Replaced Name:** *Danthonia montis-wilhelmi* Veldkamp & Fortuin, *Alpine Fl. New Guinea* 2: 1171 (1979). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *van Balgooy* 559, New Guinea: Chimbu, Wilhelm Mt., -5.45 S Lat., 145.5 E Long., 4175 m (L; IT: A, CANB, LAE).

Recent Synonyms: *Monostachya montis-wilhelmi* (Veldkamp & Fortuin) S.W.L. Jacobs, *Taxon* 31(4): 739 (1982)

Illustrations: None found.

Derivation (Clifford & Bostock 2007): From Mount Wilhelm, Papua New Guinea.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, cushion forming. Basal innovations intravaginal. Culms 6–12 cm long. Leaf-sheaths smooth, glabrous on surface. Leaf-sheath oral hairs ciliate, 2–4 mm long. Ligule a fringe of hairs, 0.4–1 mm long. Leaf-blades straight or curved, filiform, involute, 2.2–7.3 cm long, 0.4–0.8 mm wide. Leaf-blade surface smooth, glabrous.

Inflorescence. Inflorescence a panicle or comprising only a few spikelets, comprising 2–4 fertile spikelets, shorter than basal leaves. Peduncle glabrous or pubescent above. Panicle bearing 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 elliptic, laterally compressed, 5.5–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5–1 mm long. Floret callus 0.3–0.4 mm long, pubescent, obtuse, disarticulating obliquely. Floret callus hairs 0.3–0.6 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume oblong or ovate, 4.5–6 mm long, 1 length of upper glume, chartaceous, much thinner on margins, without keels, 3–5 -veined. Lower glume apex acute. Upper glume oblong or ovate, 4.25–6 mm long, 0.9–1 length of adjacent fertile lemma, chartaceous, with scarious margins, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 5–6 mm long, membranous, without keel, 9 -veined, more than 3-veined. Lemma surface smooth, with marginal hair tufts, bearing 2 hair tufts in all. Lemma hairs 1 mm long. Lemma apex dentate, 2 -fid, with filiform lobes, with lobes 1–2.5 mm long, awned, 1 -awned. Principal lemma awn from a sinus, 1.25–6 mm long overall. Palea 3–5 mm long. Palea keels ciliolate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, obovate, fleshy, glabrous. Anthers 3, 0.75–1.25 mm long. Caryopsis with adherent pericarp, obovoid, 1.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuasia. New Guinea West Papua (Irian Jaya). New Guinea.

Rytidosperma nardifolium (Veldkamp) H.P. Linder. *Telopea*, 6(4): 614: (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from New Guinea. **Basionym or Replaced Name:** *Danthonia nardifolia* J.F. Veldkamp, *Alp. Fl. New Guinea* 2: 1174 (1979). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Guinea, Mt. Victoria: Craven 3023 (L holo).

Recent Synonyms: *Monostachya nardifolia* (Veldkamp) S.W.L. Jacobs, *Taxon* 31(4): 739. 1982

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. folium*, leaf. Leaf-blades morphologically resemble those of *Nardus*.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms 10–22 cm long. Leaf-sheaths smooth, glabrous on surface. Leaf-sheath oral hairs ciliate, 1–3.5 mm long. Ligule a fringe of hairs, 0.4–0.5 mm long. Leaf-blades straight, deciduous at the ligule, filiform, involute, 6–11 cm long, 0.3–0.6 mm wide, stiff. Leaf-blade surface smooth, glabrous.

Inflorescence. Inflorescence a panicle, comprising 4–5 fertile spikelets. Peduncle pubescent above. Panicle bearing few spikelets. Panicle axis puberulous. 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 elliptic, laterally compressed, 13–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5–0.6 mm long. Floret callus 0.25 mm long, pubescent, obtuse, disarticulating obliquely.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume lanceolate or ovate, 7–8 mm long, 1.1–1.2 length of upper glume, chartaceous, much thinner on margins, without keels, 5 -veined. Lower glume apex erose, acute. Upper glume lanceolate or ovate, 6–7.5 mm long, 0.9 length of adjacent fertile lemma, chartaceous, with scarious margins, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 7–8 mm long, membranous, without keel, 9 -veined, more than 3-veined. Lemma surface smooth, with marginal hair tufts, bearing 2–4 hair tufts in all. Lemma hairs 1–2.5 mm long. Lemma apex dentate, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, 7.5 mm long overall. Lateral lemma awns present, arising on apex of lobes, 3.25–4 mm long, shorter than principal. Palea 3 mm long. Palea keels ciliolate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, oblong, 0.4 mm long, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuasia. New Guinea.

Rytidosperma nigricans (Petrie) Connor & Edgar. *New Zealand J. Bot.* 17: 331 (1979).

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

TYPE from New Zealand. **Basionym or Replaced Name:** *Danthonia semiannularis* var. *nigricans* Petrie, *Trans. & Proc. New Zealand Inst.* 46: 37 (1914). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *D. Petrie s.n.*, 29 Jan 1907, New Zealand: Mount Hector, Tararua Range, 3000–4000 ft (WELT-40273A; ILT: US-2044067 (ex hb Cheeseman)).

Recent Synonyms: *Notodanthonia nigricans* (Petrie) Zotov, *New Zealand J. Bot.* 1: 123 (1963).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): *L. nigrico*, become blackish. Becoming black with maturity, usually of spikelets.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms erect, 25–50 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades conduplicate or involute, 10–20 cm long, 1–2 mm wide. Leaf-blade surface glabrous. Leaf-blade margins smooth or scaberulous.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle contracted, 2–3.5(–8.5) cm long. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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, 6.5–9 mm long, breaking up at maturity,

disarticulating below each fertile floret. Rhachilla internodes 0.8–1.2 mm long. Floret callus evident, 0.2–0.3 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6.5–9 mm long, 1 length of upper glume, membranous, purple, without keels, 3–5 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 6.5–9 mm long, 1.5 length of adjacent fertile lemma, membranous, purple, without keels, 3–5 -veined. Upper glume apex acute or acuminate.

Florets. Fertile lemma oblong, 4.2–6 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with 2 transverse rows of hair tufts or with a transverse row of hair tufts or with marginal hair tufts (below). Lemma margins ciliate. Lemma apex lobed, 2 -fid, with lobes 2.7–3.5 mm long, incised 0.66 of lemma length, awned, 1 -awned or 3 -awned. Principal lemma awn from a sinus, geniculate, 6–8.5 mm long overall, with twisted column. Column of lemma awn 1–1.5 mm long. Lateral lemma awns absent or present, arising on apex of lobes. Palea 2.5–3 mm long. Palea keels ciliate. Palea surface glabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.5–1.1 mm long. Caryopsis with adherent pericarp, 1.1–1.3 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand North I, New Zealand South I, Stewart Is.

Rytidosperma nitens (D.I. Morris) H.P. Linder. *Telopea*, 6(4): 614: (1996).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online, U. Quattrocchi, *CRC World Dictionary of Grasses* (2006), D. Sharp, D. & B.K. Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia nitens* D.I. Morris, *Muelleria* 7(2): 155–157, f. 7, 8a (1989). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Fletcher s.n.*, 21 Jan 1979, Australia: Tasmania: Dublin Forest Block (HO-30982).

Illustrations (Books): K.O. Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (66, Fig 12), D. Sharp & B.K. Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. niteo*, shine. Spikelets or lemmas glossy at maturity.

Classification. Subfamily Danthonioidae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pallid, dull or glossy. Culms 12–25 cm long, 3 -noded. Culm-internodes ridged, smooth. Leaf-sheaths ribbed, 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 flat or involute, 4–9 cm long, 1–1.5 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence a panicle or comprising only a few spikelets, comprising 2–4(–8) fertile spikelets. Peduncle antrorsely scabrous above. Panicle open, linear, 0.9–3.5 cm long. Primary panicle branches indistinct the panicle almost racemose. Panicle axis pilose. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, ciliate, hairy all along but hairs longer above.

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 cuneate, laterally compressed, 6.5–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 1–2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6.5–7.5 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex obtuse. Upper glume lanceolate, 6.5–7.5 mm long, membranous, without keels, 5(–7) -veined. Upper glume apex obtuse.

Florets. Fertile lemma elliptic, 4–5.25 mm long, chartaceous, shiny, without keel, 7 -veined, more than 3-veined. Lemma surface with marginal hair tufts, bearing 4 hair tufts in all. Lemma hairs 1 mm long. Lemma apex lobed, 2 -fid, with lobes 1.25–2 mm long, incised 0.33 of lemma length, acute or setaceously acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 4–5.25 mm long overall, with twisted column. Column of lemma awn 1 mm long. Palea lanceolate or elliptic or oblanceolate, 0.75 length of lemma. Palea keels ciliate, adorned above, with 0.33 of their length adorned. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy. Anthers 3, 0.3–0.6 mm long. Caryopsis with adherent pericarp, obovoid, 1.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Tasmania.

Rytidosperma nivicola (Vickery) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia nivicola* Vickery, *Contr. New South Wales Natl. Herb.* 1: 300 (1950). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Vickery s.n.*, Australia (NSW; IT: CANB, K).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (542, Fig 106 as *Danthonia*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (362 as *R.niviculum*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (66, Fig 12), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.O.Mallett (ed.). *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*;

Derivation (Clifford & Bostock 2007): *L. nix*, snow; *-cola*, dweller. Alpine species.

Classification. Subfamily Danthonioidae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths glabrous or pubescent. Culms erect, slender, 10–20 cm long, 2–3 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades filiform, involute, 5–10 cm long, 0.5–1 mm wide. Leaf-blade surface smooth, glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 2–3 cm long, bearing few spikelets. 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 cuneate, laterally compressed, 8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 3–5 -veined. Lower glume primary vein smooth or scaberulous. Lower glume margins eciliate or ciliate. Lower glume apex acute. Upper glume lanceolate, 8 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 3–5 -veined. Upper glume primary vein smooth or scaberulous. Upper glume margins eciliate or ciliate. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–4 mm long, chartaceous, pallid or purple, without keel, 3 -veined, 0–3 -veined. Lemma surface with marginal hair tufts, bearing 4 hair tufts in all. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.25–0.33 of lemma length, acute or acuminate, awned, 1 -awned. Principal lemma awn from a sinus, straight, 1–2 mm long overall, without a column. Lateral lemma awns absent. Palea keels ciliate. Palea apex emarginate or truncate or obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). **Continent.** Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria, Tasmania. Tablelands.

Rytidosperma nudiflorum (P.F. Morris) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia nudiflora* P. Morris, *Victoria Naturalist* 52: 111, f. (1935). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *v. Mueller s.n.*, Australia (K).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (542, Fig 106 as *Danthonia*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (362), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.O.Mallett (ed.). *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*;

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Butt sheaths persistent and investing base of culm. Culms erect, 10–30 cm long, 2 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades aciculate, involute, 2–10 cm long, 1 mm wide, stiff. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle, comprising 5–10 fertile spikelets. Peduncle pubescent above. Panicle contracted, linear or lanceolate, 3–7 cm long, bearing few spikelets. Panicle axis pubescent. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8–13 mm long, 1 length of upper glume, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume lanceolate, 8–13 mm long, 1.5–2.3 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 5.5 mm long, chartaceous, pallid, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with marginal hair tufts (rarely with 2 additional dorsal tufts), bearing 4 hair tufts in all or 6 hair tufts in all. Lemma apex lobed, 2 -fid, with lobes 2.5 mm long, incised 0.33 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 8 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2.5 mm long. Palea oblong, 4 mm long. Palea keels ciliate. Palea apex emarginate or truncate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1–1.25 mm long, yellow. Caryopsis with adherent pericarp, oblanceolate, 2 mm long.

Distribution (TDWG). **Continent.** Australasia.

Country /Province /State. **Australia.** New South Wales, A.C.T., Victoria, Tasmania. Tablelands.

Rytidosperma nudum (Hook. f.) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 322 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from New Zealand. **Basionym or Replaced Name:** *Danthonia nuda* Hook. f., *Fl. Nov.-Zel.* 2: 337 (1855). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Northern Island: mountain near the east coast, *Colenso 4140* (HT: K).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand 5, Gramineae* (2000);.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 10–30 cm long. Ligule a fringe of hairs. Leaf-blades filiform, involute, 2–6 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence a panicle, comprising 6–15 fertile spikelets. Panicle contracted, linear or oblong, 2–3 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 4–5 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume elliptic, 4–5 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 2.5 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface glabrous, with marginal hair tufts, bearing 4 hair tufts in all. Lemma apex dentate, 2 -fid,

incised 0.05 of lemma length, mucronate or awned, 1 -awned. Principal lemma awn from a sinus, straight, 0.5–1 mm long overall, without a column. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3. Caryopsis with adherent pericarp.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **New Zealand.** New Zealand North I.

Rytidosperma occidentale (Vickery) Connor & Edgar. *New Zealand J. Bot.* 17: 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia occidentalis* Vickery, *Contr. New South Wales Natl. Herb.* 1(5): 300 (1950). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Fitzgerald s.n.*, Nov 1900, Australia: Western Australia: Karrakatta (NSW-4389; IT: K).

Recent Synonyms: *Austrodanthonia occidentalis* (Vickery) H.P. Linder, *Telopea* 7(3): 272 (1997).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. occident*, west; *-ale*, pertaining to. From western Australia.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25–60 cm long, 3–4 -noded. Culm-nodes glabrous. Leaf-sheaths smooth. Ligule a fringe of hairs. Leaf-blades involute, 5–30 cm long, 2–3 mm wide. Leaf-blade surface glabrous or hirsute.

Inflorescence. Inflorescence a panicle. Peduncle pubescent above or pilose above. Panicle contracted, lanceolate, 5–10 cm long. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, puberulous.

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, 16–23 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5 mm long, pilose, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 16–22 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex setaceously acuminate. Upper glume lanceolate, 16–22 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear, 8–10 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent, with a transverse row of hair tufts. Lemma hairs 3–4 mm long. Lemma apex lobed, 2 -fid, with lobes 4–5 mm long, incised 0.5 of lemma length, attenuate, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 12–17 mm long overall, with twisted column. Column of lemma awn 4–6 mm long. Lateral lemma awns present, arising on apex of lobes, 3–5 mm long. Palea lanceolate. Palea surface glabrous or pubescent, hairy on back. Palea apex truncate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3. Caryopsis with adherent pericarp, oblong, 2 mm long.

Distribution (TDWG). **Continent.** Australasia.

Country /Province /State. **Australia.** Western Australia. South-West.

Rytidosperma oreoboloides (F. Muell.) H.P. Linder. *Telopea*, 6(4): 614: (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*.

TYPE from PNG. **Basionym or Replaced Name:** *Festuca oreoboloides* F. Muell., *Trans. Roy. Soc. Victoria* 1(2): 38 or 39 (1889). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Giulianetti s.n.*, 1896, New Guinea: Mt. Scratchley, 12200 ft (K; ILT: MEL). LT designated by Linder & Verboom, *Telopea* 6(4): 614 (1996). ST: *MacGregor s.n.*, Papua New Guinea: Mt. Knutsford (BM, K).

Recent Synonyms: *Danthonia oreoboloides* (Muell.) Stapf, *Hook. Ic. Pl.* t. 2606. (1899). *Monostachya oreoboloides* (F. Muell.) Hitchc., *Brittonia* 2(2): 107 (1936)

Illustrations (Journals): *Hooker's Icones Plantarum* (t.2606 (1899) as *Danthonia*).

Derivation (Clifford & Bostock 2007): Gk. *-oides*, resembling. In habit resembling certain species of the sedge *Oreobolus*.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, cushion forming. Culms 2–10 cm long. Ligule a fringe of hairs. Leaf-blades aciculate, conduplicate, 0.5–3 cm long, 0.5 mm wide, stiff. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets. Spikelets solitary.

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 elliptic, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.

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

Florets. Fertile lemma elliptic, 3 mm long, membranous, without keel, 7 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface with marginal hair tufts, bearing 4 hair tufts in all. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, 0.5 mm long overall, not or scarcely exerted from spikelet. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, dorsally compressed, biconvex, 1.3 mm long. Embryo 0.33 length of caryopsis.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuasias. Borneo, Philippines, Sulawesi, Sumatra. New Guinea.

Rytidosperma oreophilum H.P. Linder & N.G. Walsh. *Muelleria* 8: 283 (1995).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Chionochloa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Australian Capital Territory: slopes of Mount Gingera, Bimberi Range, *Pullen 3041* (HT: CANB; IT: A, BO, K, L, MEL, NE, NSW).

Recent Synonyms: *Austrodanthonia oreophila* (H.P. Linder & N.G. Walsh) H.P. Linder, *New Zealand J. Bot.* 17: 332 (1979).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler,, *Grasses of New South Wales*, 4th edn (2008) (145).

Derivation (Clifford & Bostock 2007): Gk. *oros*, mountain; *phileo*, love. Mountain species.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, robust, 15–45 cm long. Ligule a fringe of hairs.

Inflorescence. Inflorescence a panicle. Panicle contracted, ovate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 12–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–17 mm long, 1 length of upper glume, membranous, without keels. Lower glume apex acuminate. Upper glume lanceolate, 12–17 mm long, 2 length of adjacent fertile lemma, membranous, without keels. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 4.5–7.5 mm long, coriaceous, shiny, without keel, more than 3-veined. Lemma surface glabrous or villous, with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, incised 0.5–0.6 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7.5–10 mm long overall, with a straight or slightly twisted column. Lateral lemma awns present, arising on apex of lobes, 2–3.3 mm long. Palea obovate, 2.8–4.2 mm long. Palea keels ciliate. Palea surface glabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.4–0.8 mm long. Caryopsis with adherent pericarp, obovoid, 1.8–2.1 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria.
Tablelands, Western Slopes.

Rytidosperma pallidum (R. Br.) A.M. Humphreys & H.P. Linder. *Ann. Mo. Bot. Gard.* 97 (3): 359 (2010).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Rytidosperma*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia pallida* R. Br., *Prodr.* 177 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: R. Brown 6232, Port Jackson, Australia (BM; IT: K, PERTH).

Recent Synonyms: *Joycea pallida* (R. Br.) H.P. Linder, *Telopea*, 6(4): 611: (1996). *Notodanthonia pallida* (R. Br.) Veldkamp, *Taxon* 29: 297 (1980).

Chionochloa pallida (R. Br.) S.W.L. Jacobs, *Taxon* 31: 742 (1982).

Illustrations (Books): C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (as *Danthonia*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (as *Chionochloa*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (40, Fig 8), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (288), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.O.Mallett (ed.). *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*;

Derivation (Clifford & Bostock 2007): L. pale-colored. Spikelets or grain pale-green.

Classification. Subfamily Danthonioidae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–120 cm long, 3–4 -noded. Ligule a fringe of hairs, 1–6 mm long. Leaf-blades filiform, involute, 20–40 cm long, 2–3 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 8–35 cm long. Panicle branches smooth or scaberulous. 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 cuneate, laterally compressed, 8–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1–2 mm long. Floret callus evident, 0.5–1 mm long, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 8–17 mm long, 1 length of upper glume, scarious, much thinner on margins, without keels, 5 -veined. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 8–17 mm long, 1.1–1.6 length of adjacent fertile lemma, scarious, with membranous margins, without keels, 5 -veined. Upper glume surface asperulous. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 7–11 mm long, chartaceous, without keel, 11 -veined, more than 3-veined. Lemma surface pilose, without hair tufts. Lemma hairs 1–2 mm long. Lemma apex lobed, 2 -fid, incised 0.5–0.7 of lemma length, setaceously acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7–11(–16) mm long overall, with twisted column. Column of lemma awn 4 mm long. Lateral lemma awns absent. Palea linear, 1 length of lemma, 2 -veined. Palea keels ciliate. Palea surface pilose, hairy on back, hairy below. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, ciliate. Anthers 3, 4 mm long. Caryopsis with adherent pericarp, ellipsoid.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria.

Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma paschale (Stapf) M. Baeza. *Gayana, Bot.*, 47: 84 (1991).

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 Grasses* (2006).

TYPE from Easter Island. **Basionym or Replaced Name:** *Danthonia paschalis* Pilg., *Nat. Hist. Juan Fernandez* 2: 67, f. 1d-h (1922). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *C.J.F. Skottsberg & I. Skottsberg* 658, 16 Jun 1917, Chile: Easter Island: on the slope of Mountain Katiki (B; IT: BAA-848 (fragm. ex B), S, US-865620 (fragm. ex B)). LT designated by ?; cited by Baeza, *Sendtnera* 3: 67 (1996).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. pascha*, Passover; *-alis*, pertaining. From Easter Island.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25–50 cm long. Ligule a fringe of hairs, 0.1–0.2 mm long. Leaf-blades filiform, involute, 5–22 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle lanceolate, 5–10 cm long, 1–2 cm wide. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 6–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pilose, hairy in 4 tufts, with longer hairs above.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–10 mm long, 1 length of upper glume, hyaline, without keels, 5 -veined. Lower glume apex acute. Upper glume lanceolate, 6–10 mm long, 1.2–2 length of adjacent fertile lemma, hyaline, without keels, 5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface with marginal hair tufts, bearing 2 hair tufts in all. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, setaceously acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 5–8 mm long overall, with twisted column. Palea oblong, 0.7 mm long. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3. Caryopsis with adherent pericarp. $2n = 24$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Pacific.

Country /Province /State. South-central Pacific. Easter Is.

Rytidosperma pauciflorum (R.Br.) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia pauciflora* R. Br., *Prodr.* 177 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Insulam Van Diemen, cujus regiones Septentrionales et praecipue Australes visitair,.

Illustrations (Books): K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (66, Fig 12), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. paucus*, few; *flos*, flower. Florets few per spikelet.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 5–15 cm long, 2–3 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades filiform, involute, 2–7 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence a panicle, comprising 4–6 fertile spikelets, exerted or embraced at base by subtending leaf. Panicle open, ovate, 1–2 cm long, bearing few spikelets. Panicle axis villous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, villous.

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, 4–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.3 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume elliptic, 4–7 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 4–7 mm long, 1.2–2 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 3–5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 3.25–3.5 mm long, chartaceous, yellow, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 2 mm long. Lemma apex lobed, 2 -fid, with lobes 2 mm long, incised 0.66 of lemma length, setaceously acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 4–7 mm long overall, with a straight or slightly twisted column. Lateral lemma awns absent. Palea oblong, 2.5 mm long. Palea keels 0.8 mm apart, ciliate. Palea surface pubescent, hairy on back, hairy below. Palea apex emarginate or truncate or obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.7 mm long. Caryopsis with adherent pericarp, obovoid, 1 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Tasmania.

Rytidosperma penicillatum (Labill.) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 327 (1979).

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 Grasses* (2006), D. Sharp, D. & B.K. Simon, *AusGrass* (2002) (as *Austrodanthonia*), E. Edgar, & H. Connor, *Flora of New Zealand Gramineae* 5 (2000), J.F. Veldkamp, *Poaceae* ms (*Flora Malesiana*).

TYPE from Australia. **Basionym or Replaced Name:** *Arundo penicillata* Labill., *Nov. Holl. Pl.* 1: 26, t. 34 (1804). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Labillardière s.n.*, Australia: Tasmania (FI-W(photo, K)).

Recent Synonyms: *Austrodanthonia penicillata* (Labill.) H.P. Linder, *Telopea* 7: 272 (1997).

Illustrations (Books): E.E. Henty, *A Manual of the Grasses of New Guinea* (1969) (as *Danthonia*), C.A. Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (55, Pl. 14 as *Danthonia*), K.O. Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (63, Fig. 11 as *Austrodanthonia*), N. Walsh & T. Entwistle, *Flora of Victoria* Vol 2 (1994) (542, Fig 106 as *Danthonia*), C.A. Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (as *Danthonia*), D. Sharp & B.K. Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002) (as *Austrodanthonia*), M.E. Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (311).

Images: D. Sharp & B.K. Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002); (as *Austrodanthonia*).

Derivation (Clifford & Bostock 2007): *L. penicillus*, a small brush; *-ata*, possessing. With tufts of long hairs on the lemmas.

Classification. Subfamily Danthoniioideae. Tribe: Danthoniieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms geniculately ascending or decumbent, slender, 35–75 cm long, 3–4 -noded. Culm-nodes glabrous. Leaf-sheaths smooth or scaberrulous, glabrous on surface or hirsute. Ligule a fringe of hairs. Leaf-blades filiform or linear, flat or involute, 7–15 cm long, 1–2 mm wide. Leaf-blade surface hirsute, sparsely hairy.

Inflorescence. Inflorescence a panicle. Peduncle pubescent above. Panicle open, linear, nodding, 5–10 cm long. Primary panicle branches indistinct the panicle almost racemose. Panicle axis pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent.

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 cuneate, laterally compressed, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent.

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, 9 -veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 10–12 mm long, 1.3 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acute or acuminate.

Florets. Fertile lemma oblong, 8 mm long, chartaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with marginal hair tufts (above and below, with or without dorsal tufts) or with marginal hair tufts and with a transverse row of hair tufts (below). Lemma hairs 1–2 mm long. Lemma apex lobed, 2 -fid, with lanceolate lobes, with lobes 4 mm long, incised 0.5 of lemma length, acuminate, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 11–12 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 3–4 mm long. Palea lanceolate, 4–4.5 mm long. Palea keels ciliate. Palea apex emarginate or truncate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.75 mm long. Caryopsis with adherent pericarp, oblong, 2–2.5 mm long.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Malesia, Papuaia.** Java. Solomon Is. **Australia, New Zealand** (*). New South Wales, A.C.T., Victoria, Tasmania. New Zealand North I, New Zealand South I. **Northwest USA, Southwestern USA.** Oregon. California.

Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma petrosum H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 317 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from New Zealand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Zealand: Cape Palliser, Wairarap, 100 ft, cliff, Dec 1973, *A.P. Druce s.n.* (HT: CHR-273105).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): *L. petra*, rock; *-osa*, full of. Growing in rocky places.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms 20–40 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades deciduous at the ligule, involute, 7–15 cm long, 1–2 mm wide, stiff.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 2–4 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Panicle branches smooth, bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, smooth.

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 cuneate, laterally compressed, 8.5–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5–0.6 mm long. Floret callus evident, 0.7–1 mm long, pilose.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8.5–15 mm long, 1 length of upper glume, membranous, mid-green, without keels, 5(–7) -veined. Lower glume apex acute. Upper glume lanceolate, 8.5–15 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, mid-green, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 7–11.5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface with a transverse row of hair tufts or with marginal hair tufts (above). Lemma apex lobed, 2 -fid, with simple equal lobes or with lateral lobes bidentate, with lobes 4.5–8 mm long, incised 0.6–0.7 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7.5–10 mm long overall, with twisted column. Column of lemma awn 2.5–4 mm long. Lateral lemma awns present, arising on apex of lobes. Palea 3.6–6 mm long. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.7–1.1 mm long, yellow. Caryopsis with adherent pericarp, 2.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand North I, New Zealand South I.

Rytidosperma pictum (Nees & Meyen) Nicora. *Darwiniana*, 18(1–2): 91 (1973).

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 Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Danthonia picta* Nees & Meyen, *Gramineae* 25–26 (1841). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.J.F. Meyen s.n.*, Feb, Chile: Cordillera de San Fernando, Río Tinguiririca, 8000–9000' (P; IT: B, BAA-850 (fragm. ex B), LE-TRIN-1987.01 (fragm., illustr. 475), US-A0865622 (fragm. ex B)). 475. *D. picta* N. et Meyen.

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 1, Aristidoideae a Pharoideae (2012) (230, as var. *pictum*), M.N.Corréa, *Flora Patagonica* Parte III, Gramineae (1978) (45, Fig 17).

Derivation (Clifford & Bostock 2007): L. painted. Glumes and/or lemmas with conspicuous pigmented veins or margins.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 15–35 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 1–1.5 mm long. Leaf-blades flat or conduplicate or convolute, 4–12 cm long, 2–3 mm wide, coriaceous. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle, comprising 20–25 fertile spikelets, embraced at base by subtending leaf. Panicle contracted, oblong, 3.5–8 cm long. Primary panicle branches 2–3 cm long. Panicle branches glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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, 13–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose. Floret callus hairs 0.5–1 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 11–13 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 11–13 mm long, 1.3 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 8.5–12 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, hairy below, with a transverse row of hair tufts. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 8.5–11 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 3–4 mm long. Palea 4–5 mm long. Palea keels ciliolate. Palea surface pilose, hairy on back, hairy below. Palea apex emarginate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 2 mm long. Caryopsis with adherent pericarp. Embryo 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South.

Mendoza. Córdoba. Neuquén, Río Negro. Rest of Chile- Biobio, La Araucanía, Maule, O'Higgins, Santado, Valparaíso. Coquimbo, Valparaíso, Santiago, O'Higgins, Maule, Biobio, La Araucanía. Los Lagos, Aisen, Magallanes.

Rytidosperma pilosum (R.Br.) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 326 (1979).

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 Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia pilosa* R. Br., *Prodr.* 177 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Brown 6234*, Australia: New South Wales: Port Jackson (BM; IT: K, MEL).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (294, Fig. 230 as *Austrodanthonia*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (542, Fig 106 as *Danthonia*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler,, *Grasses of New South Wales*, 4th edn (2008) (145 as *Austrodanthonia*), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002) (as *Austrodanthonia*), W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (as *Danthonia*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002); (as *Austrodanthonia*).

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 Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 25–50 cm long, 3–5 -noded. Culm-nodes glabrous. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a fringe of hairs. Leaf-blades flat or involute, 6–12 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 4–5 cm long. Primary panicle branches indistinct the panicle almost racemose or simple. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 9–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.7–1 mm long, pubescent.

Glumes. Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–13 mm long, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, keeled above, 5–7 -veined. Lower glume surface asperulous, rough on veins. Lower glume apex acuminate. Upper glume lanceolate, 9–13 mm long, 1.5 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, keeled above, 5 -veined. Upper glume surface asperulous, rough on veins. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 6–10 mm long, chartaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with a transverse fringe of hair and with marginal hair tufts (above, with or without additional dorsal tufts). Lemma apex lobed, 2 -fid, with lobes 2–4 mm long, incised 0.6 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 11–18 mm long overall, with twisted column. Column of lemma awn 4 mm long. Lateral lemma awns present, arising on apex of lobes, 6–8 mm long. Palea oblanceolate, 3.5–4 mm long. Palea keels ciliolate. Palea surface pilose, hairy on flanks. Palea apex emarginate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1 mm long, pallid. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Europe (*), Tropical Asia, Australasia, and Pacific.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Malesia.** Java, Sulawesi. **Australia, New Zealand** (*). Western Australia, South Australia, New South Wales, A.C.T., Victoria, Tasmania. New Zealand North I, New Zealand South I. **North-central Pacific.** Hawaii (*).

South-West. Southern. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma popinensis (D.I. Morris) A.M. Humphreys & H.P. Linder. *Ann. Mo. Bot. Gard.* 97 (3): 359 (2010).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Rytidosperma*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia popinensis* D. I. Morris, *Muelleria* 7(2): 157–159, f. 8b, 9 (1989). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Morris 8556*, Australia: Tasmania: 0.5 km N of Kempton (HO-92651; IT: AD, HO, NSW).

Recent Synonyms: *Austrodanthonia popinensis* (D.I. Morris) H.P. Linder, *Telopea* 7(3): 273 (1997).

Illustrations: None found.

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *L. popina*, eating place; *-ensis*, denoting origin. First collected near a cafe.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pallid, glossy, distinctly ribbed. Culms 20–45 cm long. Culm-internodes ridged, smooth. Culm-nodes purple. Leaf-sheaths mostly shorter than adjacent culm internode, ribbed. Ligule a fringe of hairs. Leaf-blades flat or involute, 7–15 cm long, 1–2 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially, scaberulous, rough adaxially. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle open, linear or lanceolate, 4–8 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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 cuneate, laterally compressed, 13–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1–1.5 mm long, bearded.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 14 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 7 -veined. Lower glume apex acute. Upper glume lanceolate, 13 mm long, membranous, with hyaline margins, without keels, 5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 7.5–8 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pilose, hairy below, with 2 transverse rows of hair tufts. Lemma hairs 4 mm long. Lemma apex lobed, 2 -fid, with lobes 3.5 mm long, incised 0.33 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 12 mm long overall, with twisted column. Column of lemma awn 2.5 mm long. Lateral lemma awns present, 3.5 mm long. Palea oblanceolate, 6.5–7 mm long. Palea keels ciliate, adorned all along. Palea surface pilose, hairy on margins, hairy below. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, obovoid, 2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Tasmania.

Rytidosperma pulchrum (Zotov) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 321 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from New Zealand. **Basionym or Replaced Name:** *Notodanthonia pulchra* Zotov, *New Zealand J. Bot.* 1: 111 (1963). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: V.D. Zotov s.n., 4 Jan 1944, New Zealand; Waikamaka River, ca. 3500 ft, Ruahine Mountains, river terrace in light *Nothofagus cliffortioides* forest (CHR-42376).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand 5, Gramineae* (2000);

Derivation (Clifford & Bostock 2007): *L. beautiful*. Attractive in appearance, usually the inflorescence.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms 15–30 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades deciduous at the ligule, conduplicate, 5–10 cm long, 1 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle contracted, 2–5 cm long, bearing few spikelets. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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 cuneate, laterally compressed, 6–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5–0.8 mm long. Floret callus evident, 0.2–0.4 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 6–7.5 mm long, 1 length of upper glume, membranous, without keels, 5 -veined. Lower glume apex obtuse. Upper glume ovate, 15–17 mm long, 1.4–1.6 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 3.8–5.4 mm long, chartaceous, without keel, 5(–7) -veined, more than 3-veined. Lemma surface glabrous, with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, with lobes 1.8–2.8 mm long, incised 0.5 of lemma length, awned, 1 -awned or 3 -awned. Principal lemma awn from a sinus, geniculate, 3–4.5 mm long overall, with a straight or slightly twisted column. Column of lemma awn 0.5–1 mm long. Lateral lemma awns absent or present, arising on apex of lobes. Palea 3–3.8 mm long. Palea keels ciliolate. Palea surface glabrous or pilose, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.5–1.1 mm long. Caryopsis with adherent pericarp, 1.2–1.4 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand North I, New Zealand South I.

Rytidosperma pumilum (Kirk) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 25(1): 166: (1987).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Atropis pumila* Kirk, *Trans. & Proc. New Zealand Inst.* 14: 379 (1882). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Petrie* 920, New Zealand: Macraes, Otago, 1800 ft (WELT-39891). LT designated by Zotov, New Zealand J. Bot. 1: 125 (1963).

Illustrations (Books): G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (as *Dregeochloa*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (265 as *Erythranthera*).

Derivation (Clifford & Bostock 2007): L. dwarf, low growing. Habit typically depauperate.

Classification. Subfamily Danthonioideae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 4–20 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs. Leaf-blades erect, filiform, involute, 1–5 cm long, 0.5 mm wide.

Inflorescence. Inflorescence a panicle or comprising only a few spikelets, comprising 1–15 fertile spikelets. Peduncle scaberrulous above. Panicle spiciform, linear, 1–4 cm long, bearing few spikelets. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 lanceolate, laterally compressed, 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 lanceolate, 5–7 mm long, 1 length of upper glume, membranous, purple, without keels, 3–5 -veined. Lower glume apex acute. Upper glume lanceolate, 5–7 mm long, membranous, purple, without keels, 3–5 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 4–5 mm long, chartaceous, without keel, 5–7 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins pubescent. Lemma apex dentate, 2 -fid, mucronate. Principal lemma awn from a sinus. Palea keels ciliolate. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand. New South Wales. Tablelands.

Rytidosperma quirihuense M.Baeza. *Novon* 12(1): 31 (2002).

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 Grasses* (2006).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile: Ñble: Camino Las Achiras hacia Quirihue, 36°3'S. 72°5'W, 355 m, 20 Nov 2000, C. Baeza, P. López & M. Parra 2112 (HT: CONC; IT: SGO).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From hacia Quirihue, Chile.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial. Basal innovations intravaginal. Culms erect, 25–45 cm long, 2–4 -noded. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate, 3 mm long. Ligule a fringe of hairs, 0.2–0.4 mm long. Leaf-blades 5–9 cm long, 1.5–2 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence a panicle, comprising 4–10 fertile spikelets. Panicle linear, 4.5–8 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–10 mm long, pubescent.

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 cuneate, laterally compressed, 20–24 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1–1.2 mm long, pilose, acute. Floret callus hairs 0.3–1.2 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10.5–14 mm long, 1 length of upper glume, hyaline, without keels, 5–6 -veined. Lower glume apex acute. Upper glume lanceolate, 11–14 mm long, 1 length of adjacent fertile lemma, hyaline, without keels, 5–6 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 11–13 mm long, chartaceous, without keel, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts, bearing 16 hair tufts in all (10 below, 6 above). Lemma hairs 0.7–2 mm long. Lemma apex lobed, 2 -fid, with lobes 6.5–8 mm long, incised 0.5 of lemma length, attenuate, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 12–16 mm long overall, with a straight or slightly twisted column. Lateral lemma awns present, arising on apex of lobes, 3–4 mm long. Palea 5–6.5 mm long. Palea keels spinulose. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.4–0.6 mm long, fleshy. Anthers 3, 0.8–1.8 mm long. Caryopsis with adherent pericarp, ellipsoid, 2 mm long, dark brown. Embryo 0.8–1 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central.

Biobio.

Rytidosperma racemosum (R.Br.) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 327 (1979).

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 Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia racemosa* R. Br., *Prodr.* 177 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Brown* 6235, Australia: New South Wales: Port Jackson (BM; IT: K(fragm., MEL, PERTH)).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (as *Asutrodanthonia*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (542, Fig 106 as *Danthonia racemosa* var. *racemosa*), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (as *Danthonia racemosa* var. *obtusata*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (as *Asutrodanthonia*), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002) (as *Asutrodanthonia*), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (311).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002); (as *Asutrodanthonia*), K.O.Mallett (ed.). *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*; (as *Asutrodanthonia*).

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 Danthonioidae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–60 cm long, 3–4 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or hirsute, with tubercle-based hairs. Ligule a fringe of hairs, 0.25 mm long. Leaf-blades involute, 5–15 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, hairy abaxially, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Panicle open, linear, equilateral, 5–15 cm long. Primary panicle branches indistinct the panicle almost racemose. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 6–10 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 cuneate, laterally compressed, 9–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 7–16 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 5–7 -veined. Lower glume surface asperulous, rough on veins. Lower glume apex truncate or acute. Upper glume lanceolate, 7–16 mm long, 0.9–1.3 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 5–7 -veined. Upper glume surface asperulous, rough on veins. Upper glume apex truncate or acute.

Florets. Fertile lemma oblong, 8–12 mm long, chartaceous, pallid, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with a transverse fringe of hair and with marginal hair tufts (above, with or without dorsal tufts). Lemma apex lobed, 2 -fid, with oblong lobes, with lobes 5–6 mm long, incised 0.6 of lemma length, acute, awned, 1 -awned or 3 -awned. Principal lemma awn from a sinus, geniculate, 14 mm long overall, with twisted column. Column of lemma awn 4 mm long. Lateral lemma awns absent or present, arising on apex of lobes, 7 mm long. Palea elliptic, 4–5 mm long. Palea keels ciliolate. Palea surface glabrous or pilose, hairy on flanks, hairy below. Palea apex emarginate or obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1.5–2 mm long. Caryopsis with adherent pericarp, obovoid, 2.5 mm long.

Distribution (TDWG). Continent. Europe (*), Australasia, North America.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia** and **New Zealand**. Western Australia, South Australia, Queensland, New South Wales, A.C.T., Victoria, Tasmania, Lord Howe-Norfolk Is. Kermadec Is, New Zealand North I, New Zealand South I. **Southwestern USA**. California.

Ereman. Southern. South East, Inland. Tablelands, Western Slopes.

Rytidosperma remotum (D.I. Morris) A.M. Humphreys & H.P. Linder. *Ann. Mo. Bot. Gard.* 97 (3): 360 (2010).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia remota* D. I. Morris, *Muelleria* 7(2): 160–162, f. 10, 11a (1989). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Tasmania: summit of Hibbs Pyramid, 4 Feb 1984, A.M. Buchanan 2878 (HT: HO-91392).

Recent Synonyms: *Austrodanthonia remota* (D.I. Morris) H.P. Linder, *Telopea* 7(3): 273 (1997).

Illustrations: None found.

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. distant*. From an isolated locality.

Classification. Subfamily Danthonioidae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Butt sheaths pallid, glossy. Culms erect, slender, 10–20 cm long. Culm-internodes smooth. Leaf-sheaths ribbed, smooth. Ligule a

fringe of hairs, 1 mm long. Leaf-blades filiform, involute, 2–4 cm long, 1 mm wide. Leaf-blade surface smooth. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle or comprising only a few spikelets, comprising 2–7 fertile spikelets. Peduncle scaberulous above. Panicle open, ovate, 1.5–3 cm long, bearing few spikelets. Panicle axis pilose. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate.

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 cuneate, laterally compressed, 9–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–0.75 mm long, bearded.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–12 mm long, 1 length of upper glume, membranous, without keels, 9–13 -veined. Lower glume apex obtuse. Upper glume lanceolate, 9–12 mm long, membranous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Fertile lemma oblanceolate, 5.5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 1.5 mm long. Lemma apex lobed, 2 -fid, with lobes 2.5 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7.5–9 mm long overall, with twisted column. Column of lemma awn 2.5 mm long. Lateral lemma awns present, 3.5 mm long. Palea oblanceolate, 3.5–4 mm long. Palea surface pilose, hairy on margins. Palea apex dentate, 2–3 -fid, truncate or acute. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy. Anthers 3, 0.75 mm long. Caryopsis with adherent pericarp, 1.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Tasmania.

Rytidosperma richardsonii (Cashmore) Connor & Edgar. *New Zealand J. Bot.* 17: 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia richardsonii* Cashmore, *Comm. Austr.*, *C.S.I.R.*, *Bull.* 69(app.): 2 (1932). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Cashmore Ga-63*, 2 Dec 1932, Australia: South Australia: Werribee (AD; IT: BM, K, NSW-4726, NSW-1204). HT originally at ADW.

Recent Synonyms: *Austrodanthonia richardsonii* (Cashmore) H.P. Linder, *Telopea* 7(3): 273 (1997).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (296, Fig. 232), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (533, Fig. 104 as *Danthonia*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (146), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): in honor of Arnold Edwin Victor Richardson (1883–1949). Australian agricultural scientist.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–70 cm long, 1 mm diam., 4 -noded. Leaf-sheaths smooth. Ligule a fringe of hairs. Leaf-blades flat or involute, 20–30 cm long, 1–2.5 mm wide. Leaf-blade surface glabrous or hirsute, sparsely hairy.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, lanceolate or ovate, 4–12 cm long. Primary panicle branches 2–4 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 8–13 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex attenuate. Upper glume elliptic, 8–13 mm

long, 1–1.5 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, 8–9 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent, with a transverse row of hair tufts. Lemma hairs 4–5 mm long. Lemma apex lobed, 2 -fid, with lobes 5 mm long, incised 0.6 of lemma length, attenuate, awned, 3 -awned. Principal lemma awn from a sinus, curved, reflexed, 7–11 mm long overall, without a column. Lateral lemma awns present, arising on apex of lobes, 2–3 mm long. Palea lanceolate or elliptic, 4.5 mm long. Palea keels ciliolate. Palea surface villous, hairy on back or on flanks, hairy below. Palea apex acute. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1–2 mm long, yellow or orange. Caryopsis with adherent pericarp, obovoid, 1.75 mm long.

Distribution (TDWG). Continent. Australasia, North America.

Country /Province /State. Australia. A.C.T., Queensland, South Australia, Victoria. **Southwestern USA.** California.

Southern. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma semiannulare (Labill.) Zotov. *N. Zeal. Journ. Bot.* i. 116 (1963).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Arundo semiannularis* Labill., *Nov. Holl. Pl.* 1: 26, t. 33 (1804). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Herb. Webb 114*, (K).

Recent Synonyms: *Notodanthonia semiannularis* (Labill.) Zotov, *New Zealand J. Bot.* 1: 116 (1963).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (305, Fig 239), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (55, Pl 14 as *Danthonia*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (533, Fig 104 as *Danthonia*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (308), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. semi-*, half; *annulus*, a ring; *-aris*, pertaining to. The lemma bears a half ring of hairs.

Classification. Subfamily Danthonioideae. Tribe: Danthoniaceae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–45 cm long, 3 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades straight, involute, 7–15 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 5–8 cm long. Primary panicle branches appressed. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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 cuneate, laterally compressed, 7–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, incurved at apex. Lower glume lanceolate, 7–11 mm long, 1 length of upper glume, chartaceous, much thinner on margins, without keels, 7 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–11 mm long, 1.5 length of adjacent fertile lemma, chartaceous, with membranous margins, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 4–5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent, with a transverse row of hair tufts. Lemma hairs 3–4 mm long. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, setaceously acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9 mm long overall, with twisted column. Column of lemma awn 2–3 mm long. Lateral lemma awns absent. Palea linear or oblong, 2.5–3.5 mm long. Palea keels ciliolate, adorned above. Palea surface pubescent, hairy on back, hairy below. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1 mm long, yellow. Caryopsis with adherent pericarp, obovoid, 1.5 mm long.

Distribution (TDWG). **Continent.** Europe (*), Australasia, Pacific.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia, New Zealand.** Western Australia, South Australia, New South Wales, Victoria, Tasmania. **North-central Pacific.** Hawaii (*).

Southern. Coast, Western Slopes, Western Plains.

Rytidosperma setaceum (R.Br.) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Austrodanthonia*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Austrodanthonia*).

TYPE from Australia. **Basionym or Replaced Name:** *Danthonia setacea* R. Br., *Prodr.* 177 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Brown* 6232, Australia: Western Australia: King George's Sound (BM; IT: BRI, K, MEL).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (296, Fig. 233 as *Austrodanthonia*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (536, Fig. 105 as *Danthonia setacea* var. *setacea*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (147 as *Austrodanthonia*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (52, Fig. 10 as *Austrodanthonia*), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002) (as *Austrodanthonia*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002); (as *Austrodanthonia*).

Derivation (Clifford & Bostock 2007): *L. seta*, bristle; *-acea*, indicating resemblance. With bristle-like leaf-blades.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 15–60 cm long, 2–4 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or hirsute, with tubercle-based hairs. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades straight or curved, filiform, involute, 5–20 cm long, 1 mm wide. Leaf-blade surface ribbed, scabrous, rough adaxially, glabrous or hirsute, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Peduncle glabrous or pubescent above. Panicle contracted, linear to elliptic, 3–9 cm long. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 8–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–0.75 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or lanceolate, 8–14 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acute or acuminate. Upper glume linear or lanceolate, 8–14 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume apex acute or acuminate.

Florets. Fertile lemma lanceolate or elliptic, 4–6 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 2–3 mm long. Lemma apex lobed, 2 -fid, with lobes 2–3 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 5–9 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 4–6 mm long. Palea oblong or oblanceolate, 2.5 mm long. Palea keels ciliate. Palea apex obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.75 mm long. Caryopsis with adherent pericarp, oblong, 1–1.5 mm long.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Western Australia, South Australia, New South Wales, Victoria, Tasmania.

Ereman, South-West. Southern. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma setifolium (Hook. f.) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 316 (1979).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online, U. Quattrocchi, *CRC World Dictionary of Grasses* (2006), E. Edgar, & H. Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Danthonia semiannularis* var. *setifolia* Hook. f., *Fl. Nov.-Zel.* 1: 304 (1853). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Colenso* 2366, New Zealand: sides of R. Whangaehu (K). LT designated by Zotov, *New Zealand J. Bot.* 1: 108 (1963).

Illustrations: None found.

Images: E. Edgar & H. E. Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): *L. seta*, bristle; *folium*, leaf. Leaf-blades bristle-like.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms 25–50 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.2–0.8 mm long. Leaf-blades deciduous at the ligule, filiform, involute, 10–35 cm long, 1 mm wide, stiff.

Inflorescence. Inflorescence a panicle. Panicle open, 3–6 cm long, bearing few spikelets. Panicle branches smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising (3–)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 cuneate, laterally compressed, (5.5–)7–11(–20) mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.6–1 mm long. Floret callus evident, 0.5 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–11 mm long, 1 length of upper glume, membranous, purple, without keels, 3–5 -veined. Lower glume apex obtuse or acute. Upper glume lanceolate, 7–11 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, purple, without keels, (3–)5(–7) -veined. Upper glume apex obtuse or acute.

Florets. Fertile lemma oblong, 5.5–7.5 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma margins eciliate or ciliate. Lemma apex lobed, 2 -fid, with lobes 3–4 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 8–12 mm long overall, with twisted column. Column of lemma awn 1–2 mm long. Lateral lemma awns present, arising on apex of lobes. Palea 3–5 mm long. Palea keels ciliolate. Palea surface glabrous or pilose, hairy on flanks, hairy below. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1.5–3 mm long. Caryopsis with adherent pericarp, 1.1–1.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand North I, New Zealand South I, Stewart Is.

Rytidosperma sorianoii Nicora. *Darwiniana*, 18(1–2): 89 (1973).

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 Grasses* (2006).

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina: Chubut: Depto. Río Senguerr. Mallín de vera, *Soriano* 4490 (HT: BAA).

Illustrations (Books): F.O. Zuloaga, Z.E. Rugolo & A.M. Anton, *Flora Argentina* 3 – 1, Aristidoideae a Pharoideae (2012) (233), M.N. Correa, *Flora Patagonica* Parte III, Gramineae (1978) (45, Fig 15).

Derivation (Clifford & Bostock 2007): in honor of Alberto Soriano (fl. 1960) Argentinian agriculturalist.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 10–25 cm long. Leaf-sheaths pilose, with tubercle-based hairs, outer margin hairy. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades flat or conduplicate, 3–6 cm long, 1.5–2 mm wide. Leaf-blade surface pilose or hirsute, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, comprising 8–15 fertile spikelets. Panicle contracted, oblong, 1.5–3 cm long, bearing few spikelets. Panicle branches bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

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, 6–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose. Floret callus hairs 0.5–1.5 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 7.5–8 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume lanceolate, 7.5–8 mm long, 1.5 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 5–6 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent, with 2 transverse rows of hair tufts. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6 mm long overall, with a straight or slightly twisted column. Lateral lemma awns present, arising on apex of lobes, 0.7–1.3 mm long. Palea 3 mm long. Palea surface pilose, hairy on back or on flanks, hairy below. Palea apex acute. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.5 mm long. Caryopsis with adherent pericarp, 1.5 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South.

Chubut, Río Negro.

Rytidosperma subulatum (A. Rich.) T.A. Cope. *Kew Bull.*, 39(4): 835 (1984).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Ethiopia. **Basionym or Replaced Name:** *Danthonia subulata* A. Rich., *Tent. Fl. Abyss.* 2: 420 (1850). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Crescit in montosis provinciae Ouodgerate,.

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (75, Fig 32 as *R. subulata*).

Derivation (Clifford & Bostock 2007): *L. subulus*, a fine point; -*ata*, possessing. Glumes, lemmas or calluses sharply tapered.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect or geniculately ascending, 15–45 cm long, 2–3 -noded. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades erect, straight or curled, filiform, convolute, 10–20 cm long, 1 mm wide, stiff.

Inflorescence. Inflorescence a panicle or composed of racemes or comprising only a few spikelets, comprising 1–5 fertile spikelets. Panicle open, linear, 5–8 cm long, bearing few spikelets. Primary panicle branches simple, bearing 1–2 fertile spikelets on each lower branch. Racemes 1, single, paucilateral, 5–8 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5 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 cuneate, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pilose.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma, gaping. Lower glume lanceolate, 10–12 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume elliptic, 10–12 mm long, 1.3–1.7 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 6–9 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with marginal hair tufts, bearing 2–4 hair tufts in all. Lemma apex lobed, 2 -fid, with lanceolate lobes, incised 0.5–0.7 of lemma length, acute or acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6–12 mm long overall, with twisted column. Column of lemma awn 3–4 mm long. Lateral lemma awns absent. Palea 1 length of lemma. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, ciliate. Anthers 3, 4 mm long. Caryopsis with adherent pericarp, oblong, 3 mm long.

Distribution (TDWG). Continent. Africa and Temperate Asia.

Country /Province /State. Northeast Tropical Africa. Ethiopia (inc. Eritrea). Arabian Peninsula. Yemen.

Rytidosperma telematicum Connor & Molloy. *New Zealand J. Bot.* 43(3): 721 (-726; figs. 1–3, 5) (2005).

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

TYPE from New Zealand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Zealand, Tekapo Scientific Reserve: Molloy (CHR holo).

Illustrations: None found.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Basal innovations intravaginal. Culms (2–)8–10(–20) cm long, 3–5 -noded, rooting from lower nodes. Culm-internodes smooth. Leaf-sheaths 0.5–1 cm long, wider than blade at the collar, ribbed, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate, 0.5–0.75 mm long. Ligule a fringe of hairs, 0.2–0.3 mm long. Leaf-blades deciduous at the ligule, involute, 10–25 cm long, 2 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex muticous or pungent, hardened.

Inflorescence. Inflorescence a panicle or composed of racemes, comprising 3–7 fertile spikelets. Peduncle 3–7 cm long. Racemes 1, single, (0.5–)1–2(–3.5) cm long. Rhachis scaberulous on margins. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate, hairy all along but hairs longer above.

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, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3–0.7 mm long, glabrous. Floret callus 0.1–0.25 mm long, pilose, obtuse, disarticulating obliquely. Floret callus hairs 0.3–0.5 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume linear, 4–5 mm long, 1 length of upper glume, membranous, much thinner on margins, 1-keeled (weakly), 3–5 -veined. Lower glume lateral veins meeting at apex. Lower glume surface smooth or asperulous, rough above, puberulous, hairy above. Lower glume apex acute, mucronate. Upper glume linear, 4–5 mm long, chartaceous, 1-keeled (weakly), 3–5 -veined. Upper glume lateral veins meeting at apex. Upper glume surface smooth or asperulous, rough above, puberulous, hairy above. Upper glume apex acute, mucronate.

Florets. Fertile lemma ovate, 1.5–2.25 mm long, chartaceous, without keel, 5–7 -veined, more than 3-veined. Lemma lateral veins meeting above. Lemma surface with 2 transverse rows of hair tufts. Lemma apex dentate, 2 -fid, with lobes 0.2 mm long, muticous or mucronate. Principal lemma awn from a sinus. Palea 1.5–2 mm long. Palea keels scabrous, adorned all along. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.3 mm long, fleshy, veined, glabrous or ciliate. Anthers 3, 0.3–0.75 mm long, purple. Caryopsis with adherent pericarp, ovoid, 0.8–1 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand South I.

Rytidosperma tenue (Petrie) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 321 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from New Zealand. **Basionym or Replaced Name:** *Danthonia buchananii* var. *tenuis* Petrie, *Trans. & Proc. New Zealand Inst.* 46: 37 (1914). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Petrie 1280*, Dec 1893 [1281 to Hackel], New Zealand: Upper Waipori, Otago (WELT-39920; ILT: CHR, OTA). LT designated by Zotov, *New Zealand J. Bot.* 1: 111 (1963).

Illustrations: None found.

Images: E. Edgar & H. E. Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): L. thin. Culms, leaf-blades or pedicels, slender.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths light brown. Basal innovations extravaginal or intravaginal. Culms 10–25 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface or puberulous. Ligule a fringe of hairs, 0.2–0.3 mm long. Leaf-blades involute, 7–15 cm long, 1–2 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Peduncle scabrous above. Panicle contracted, linear, 1–7 cm long, bearing few spikelets. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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 cuneate, laterally compressed, 6–7.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.7–1 mm long. Floret callus evident, 0.2–0.3 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–7.4 mm long, 1 length of upper glume, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume lanceolate, 6–7.4 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.7–3.2 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent, with basal hair tufts near margin or with a transverse row of hair tufts. Lemma apex lobed, 2 -fid, with lobes 0.7–1.2 mm long, incised 0.25–0.33 of lemma length, setaceous acuminate, awned, 1 -awned. Principal lemma awn from a sinus, straight or geniculate, 1.5–2.5 mm long overall, without a column or with a straight or slightly twisted column. Lateral lemma awns absent. Palea 2.5 mm long. Palea keels ciliolate. Palea surface pilose, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.6–0.9 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa, Australasia.

Country /Province /State. Macaronesia. Madeira. **New Zealand.** New Zealand South I.

Rytidosperma tenuius (Steud.) Erikson, Hansen & Sunding. *Fl. Macaronesia* ed.2, 1:93 [Jan.] (1979).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online, D. Sharp, D. & B.K. Simon, *AusGrass* (2002) (as *Austrodanthonia*), E. Edgar, & H. Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from Australia. **Basionym or Replaced Name:** *Plinthanthesis tenuior* Steud., *Syn. Pl. Glumac.* 1: 14 (1855) [1853]. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: D'Urville s.n., Australia: New South Wales: Port Jackson (P).

Recent Synonyms: *Austrodanthonia tenuior* (Steud.) H.P. Linder, *Telopea* 7(3): 273 (1997).

Illustrations (Books): J.P. Jessop, G.R.M. Dashorst & F.M. James, *Grasses of South Australia* (2006) (297, Fig. 234 as *Austrodanthonia*), N. Walsh & T. Entwistle, *Flora of Victoria* Vol 2 (1994) (536, Fig. 105 as *Danthonia*), S.W.L. Jacobs, R.D.B. Whalley & D.J.B. Wheeler, *Grasses of New South Wales*, 4th edn (2008) (147 as *Austrodanthonia*), K.O. Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (52, Fig. 10 as *Austrodanthonia*), D. Sharp & B.K. Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002) (as *Austrodanthonia*).

Images: D. Sharp & B.K. Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002); (as *Austrodanthonia*).

Derivation (Clifford & Bostock 2007): L. more slender. More delicate than related species.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–90 cm long, 3–4 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or hirsute, with tubercle-based hairs. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades flat or involute, 10–20 cm long, 1–3 mm wide. Leaf-blade surface glabrous or hirsute.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear or lanceolate or ovate, 5–20 cm long. Primary panicle branches 2–4 cm long. Panicle branches scabrous, with scattered hairs or glabrous. 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 cuneate, laterally compressed, 10–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 10–17 mm long, 1 length of upper glume, membranous, without keels, 5 -veined. Lower glume surface asperulous, rough on veins. Lower glume apex acuminate. Upper glume elliptic, 10–17 mm long, 1.5 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume surface asperulous, rough on veins. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 8–10 mm long, chartaceous, yellow, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma hairs 4–5 mm long. Lemma apex lobed, 2 -fid, with lobes 5–7 mm long, incised 0.66 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 9–12 mm long overall, with twisted column. Column of lemma awn 2–3 length of limb. Lateral lemma awns present, arising on apex of lobes, 2–3 mm long. Palea elliptic or oblanceolate. Palea keels ciliate. Palea surface villous, hairy on back and on flanks, hairy below. Palea apex emarginate or truncate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1.5 mm long, yellow or orange. Caryopsis with adherent pericarp, oblanceolate, 2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand (*). South Australia, Queensland, New South Wales, A.C.T., Victoria, Tasmania. New Zealand North I.

Southern. Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

Rytidosperma thomsonii (Buchan.) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 322 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from New Zealand. **Basionym or Replaced Name:** *Danthonia thomsonii* Buchanan, *Indig. Grass. N. Zeal.* t. 36 (2) (1879). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *D. Petrie s.n.*, New Zealand: Mount St. Bathans, Otago, 1000–2000 ft (WELT-59624 (Buchanan's folio)).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand 5, Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): in honor of George Malcolm Thomson (1849–1933) New Zealand educator and amateur botanist.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Butt sheaths herbaceous, not bulbous or thickened and forming a bulb. Basal innovations intravaginal. Culms 20–45 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate, 1–3 mm long. Ligule a fringe of hairs, 0.3 mm long. Leaf-blades involute, 10–20 cm long, 1–2 mm wide, stiff. Leaf-blade surface glabrous or pilose. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle contracted, linear, 3–6.5 cm long. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

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, 3.5–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5 mm long. Floret callus evident, 0.2–0.3 mm long, pilose.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, (3.5–)5–7(–9) mm long, 1 length of upper glume, membranous, without keels, 5(–7) -veined. Lower glume apex acute. Upper glume lanceolate or ovate, (3.5–)5–7(–9) mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3(–5) -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.5–3.5 mm long, chartaceous, without keel, 7(–9) -veined, more than 3-veined. Lemma surface with marginal hair tufts, bearing 4 hair tufts in all. Lemma apex dentate, 2 -fid, incised 0.1 of lemma length, mucronate or awned, 1 -awned. Principal lemma awn from a sinus, straight, (0.2–)0.5–1(–2.5) mm long overall, without a column. Lateral lemma awns absent. Palea 2.3–3 mm long. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.4–0.7 mm long. Caryopsis with adherent pericarp, 1–1.3 mm long.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **New Zealand.** New Zealand South I.

Rytidosperma unarede (Raoul) Connor & Edgar. *New Zealand J. Bot.* 17: 328 (1979).

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

TYPE from New Zealand. **Basionym or Replaced Name:** *Rytidosperma unarede*, *Danthonia unarede* Raoul, *Ann. Sci. Nat., Bot., ser. 3*, 2: 116 (1844). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Raoul s.n.*, 1843, New Zealand: Banks Peninsula (P; IT: K).

Recent Synonyms: *Notodanthonia unarede* (Raoul) Zotov, *New Zealand J. Bot.* 1: 122 (1963)

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand 5, Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): vernacular name employed for the species by the Maori people at Akaroa, New Zealand.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations extravaginal. Culms 35–85 cm long. Leaf-sheaths glabrous on surface or pilose. Leaf-sheath oral hairs bearded, 4 mm long. Ligule a fringe of hairs, 0.2–0.8 mm long. Leaf-blades flat or involute, 20–40 cm long, 2–3.5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 7–18 cm long. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising (3–)4–6(–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 cuneate, laterally compressed, 7.5–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.4–0.6 mm long. Floret callus evident, 0.5–0.8 mm long, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7.5–12 mm long, 1 length of upper glume, membranous, without keels, 5(–7) -veined. Lower glume apex acute. Upper glume lanceolate, 7.5–12 mm long, 1.2 length of adjacent fertile lemma, membranous, without keels, 5(–7) -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 6–10 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, with lobes 4–7 mm long, incised 0.66 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6–12 mm long overall, with twisted column. Column of lemma awn 1–3 mm long. Lateral lemma awns present, arising on apex of lobes. Palea 4–5 mm long. Palea keels ciliolate. Palea surface glabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 0.3–1.6 mm long. Caryopsis with adherent pericarp, 1.6–1.8 mm long.

Distribution (TDWG). **Continent.** Australasia.

Country /Province /State. **New Zealand.** Lord Howe-Norfolk Is. Chatham Is, Kermadec Is, New Zealand North I, New Zealand South I, Stewart Is.

Rytidosperma vestitum (Pilger) H.E.Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 332 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from New Guinea. **Basionym or Replaced Name:** *Danthonia vestita* Pilg., *Bot. Jahrb. Syst.* 62: 457 (1929). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Guinea: Nordostl. Neu-Guinea: Saruwaged-Gebirge, *Keysser s.n.* (HT: B; IT: BM).

Illustrations (Books): E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (as *Danthonia*).

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 20–45 cm long. Ligule a fringe of hairs. Leaf-blades aciculate, involute, 5–15 cm long, 2 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence a panicle, aerial or shorter than basal leaves. Panicle open, oblong or ovate, 3–5 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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 cuneate, laterally compressed, 10–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 10–13 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume lanceolate, 10–13 mm long, 1.5 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 7–8 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface glabrous, with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, simple at base, 6–9 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2–2.5 mm long. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, ciliate. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuaia. New Guinea.

Rytidosperma vickeryae M. Gray & H.P. Linder. *Austral. Syst. Bot.*, 12(5): 744 (1999).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: New South Wales: Koseiuszko, between Perisher Gap and Charlottes Pass, ca. 100 m below Betts Creek Bridge, 9 Feb 1993, *Linder 5708* (HT: BOL; IT: CANB, NSW).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (362).

Derivation (Clifford & Bostock 2007): in honor of Joyce Winifred Vickery (1908–1979) Australian botanist.

Classification. Subfamily Danthoniioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Basal innovations intravaginal. Culms erect or geniculately ascending, 10–25 cm long, 2 -noded. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades conduplicate, 30–60 cm long, 2–3 mm wide. Leaf-blade surface glabrous. Leaf-blade margins smooth. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, comprising 5–12 fertile spikelets. Panicle open, ovate, 2–5 cm long, 3–5 cm wide, bearing few spikelets. Primary panicle branches spreading. Panicle branches glabrous, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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, 5.5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4–0.5 mm long, bearded. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.8–5 mm long, 1 length of upper glume, membranous, mid-green and purple, without keels, 5 -veined. Lower glume primary vein scaberulous. Lower glume apex acute. Upper glume lanceolate, 3.8–5 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, mid-green and purple, without keels, 5 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–4 mm long, chartaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma lateral veins transversely connected at apex. Lemma surface with marginal hair tufts, bearing 2–4 hair tufts in all. Lemma apex lobed, 2 -fid, with lobes 1.5–1.6 mm long, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, straight, 2.5–3.2 mm long overall, with a straight or slightly twisted column. Palea elliptic or obovate, 3.2–3.4 mm long. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, veined, glabrous. Anthers 3, 1–1.2 mm long. Caryopsis with adherent pericarp, obovoid, plano-convex, 1.2–1.5 mm long, light brown.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T. Tablelands.

Rytidosperma violaceum (Desvaux) Nicora. *Darwiniana*, 18(1–2): 91 (1973).

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 Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Danthonia violacea* E. Desv., *Fl. Chil.* 6: 365, t. 80, f. 1 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Gay s.n.*, Chile (P; IT: BAA, SGO (fragm. ex BAA), US- (fragm. ex P)).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 1, Aristidoideae a Pharoideae (2012) (233), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (45, Fig 16).

Derivation (Clifford & Bostock 2007): L. violet. Spikelets, stigmas or anthers violet-colored.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 35 cm long, 3–4 -noded, rooting from lower nodes. Leaf-sheaths pilose, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 1–1.5 mm long. Leaf-blades flat or conduplicate, 5–16 cm long, 2–2.5 mm wide, flaccid. Leaf-blade surface pilose or hirsute, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, comprising 30–40 fertile spikelets. Panicle contracted, elliptic, 2–7 cm long. Primary panicle branches 1–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, ciliate.

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, 10–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.7–1.5 mm long. Floret callus evident, pilose. Floret callus hairs 0.5–1.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 7.5–11 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 7.5–11 mm long, 1.2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 5–9 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7.5–10 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2.5–4 mm long. Palea 3–4 mm long. Palea keels ciliate. Palea surface pilose, hairy on back, hairy below. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1–1.2 mm long. Caryopsis with adherent pericarp, 1.5–1.7 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

$2n = 24$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central.

Chubut, Neuquén, Río Negro. Valparaíso, Santiago, O'Higgins, Maule, Biobío, La Araucanía.

Rytidosperma virescens (Desv.) Nicora. *Darwiniana*, 18(1–2): 93 (1973).

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 Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Danthonia virescens* E. Desv., *Fl. Chil.* 6: 363 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Gay s.n.*, Chile (P; IT: BAA (fragm. ex P), SGO (fragm. ex P), US- (fragm. ex P)).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 1, Aristidoideae a Pharoideae (2012) (234, as var. *virescens*), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (133, Fig. 29), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (49, Fig 18).

Derivation (Clifford & Bostock 2007): *L. viresco*, become green. Panicle shiny-green.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 40–55 cm long, 2–3 -noded. Leaf-sheaths pilose, outer margin hairy. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 1.2–1.5 mm long. Leaf-blades curved, filiform, 6–25 cm long, 1–2 mm wide, coriaceous, stiff. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, comprising 12–16 fertile spikelets. Panicle open, linear, 4.5–7 cm long, bearing few spikelets. Primary panicle branches 2–4 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, ciliate, hairy below.

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, 15–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.7–1.5 mm long. Floret callus evident, pilose. Floret callus hairs 1–2.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 16–19 mm long, 1 length of upper glume, membranous, without keels, 5–9 -veined. Lower glume lateral veins with cross-veins. Lower glume apex acute. Upper glume lanceolate, 16–19 mm long, 1.4 length of adjacent fertile lemma, membranous, without keels, 5–9 -veined. Upper glume lateral veins with cross-veins. Upper glume apex acute.

Florets. Fertile lemma oblong, 12–16 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with 2 transverse rows of hair tufts. Lemma hairs 5–7 mm long. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 10–17 mm long overall, with twisted column. Column of lemma awn 4–5 mm long. Lateral lemma awns present, arising on apex of lobes, 4–7 mm long. Palea 5–7 mm long, chartaceous. Palea keels ciliolate. Palea surface pilose, hairy on flanks. Palea apex dentate, 3 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, 1.2–2 mm long. Caryopsis with adherent pericarp, 2–2.5 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South.

Mendoza. Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. Rest of Chile- Biobio, La Araucania, Maule, O'Higgins, Santado, Valparaiso. Coquimbo, Valparaiso, Santiago, O'Higgins, Maule, Biobio, La Araucania. Los Lagos, Aisen, Magellanes.

Rytidosperma viride (Zotov) H.E. Connor & E. Edgar. *New Zealand J. Bot.*, 17(3): 316 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Notodanthonia viridis* Zotov, *New Zealand J. Bot.* 1: 108 (1963). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *V.D. Zotov s.n.*, 5 Apr 1931, New Zealand: onetapu Desert, Volcanic Plateau (CHR-2484).

Illustrations: None found.

Images: E.Edgar & H.E.Connor, *Flora of New Zealand* 5, *Gramineae* (2000);.

Derivation (Clifford & Bostock 2007): *L. green*. Widely applied but especially to species with green spikelets.

Classification. Subfamily Danthonioideae. Tribe: Danthoneae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms 25–55 cm long. Leaf-sheaths glabrous on surface or pilose. Leaf-sheath oral hairs ciliate, 3–4 mm long. Ligule a fringe of hairs, (0.2–)0.8–1.5 mm long. Leaf-blades deciduous at the ligule, involute, 15–35 cm long, 2–3 mm wide. Leaf-blade surface glabrous or pubescent, sparsely hairy. Leaf-blade margins smooth to scabrous.

Inflorescence. Inflorescence a panicle. Peduncle smooth or scaberulous above. Panicle open, 5–10 cm long, bearing few spikelets. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 3–4(–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 cuneate, laterally compressed, (6–)8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.7–1 mm long. Floret callus evident, 0.5 mm long, pilose.

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, purple, without keels, 5(–7) -veined. Lower glume apex obtuse. Upper glume lanceolate, 8–12 mm long, 1.2–1.6 length of adjacent fertile lemma, membranous, purple, without keels, 3(–5) -veined. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 6.5–7.5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent, with 2 transverse rows of hair tufts. Lemma apex lobed, 2 -fid, with lobes 4–4.7 mm long, incised 0.6–0.7 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 8–11 mm long overall, with twisted column. Column of lemma awn 1–1.5 mm long. Lateral lemma awns present, arising on apex of lobes. Palea 3.5–4.5 mm long. Palea keels ciliate. Palea surface pilose, hairy on back or on flanks, hairy below. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, ciliate. Anthers 3, (0.8–)1–1.5(–2) mm long. Caryopsis with adherent pericarp, 1.4–1.7 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand North I, New Zealand South I.