

Panicum acrotrichum Hook. f. *Journ. Linn. Soc.* vii. 226. (1864).

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

TYPE from The Cameroons. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Mann 2100*, Cameroon (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. akros, at the tip; thrix, hair. Sterile lemma bearing stiff hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, slender, 15–60 cm long, rooting from lower nodes. Leaf-sheaths narrower than blade at the collar. Ligule a ciliate membrane. Leaf-blade base broadly rounded. Leaf-blades spreading, lanceolate, 3–8 cm long, 8–23 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface pilose, sparsely hairy. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, oblong, 7–15 cm long. Primary panicle branches 1–2 -nate. Panicle branches capillary. 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 lanceolate, dorsally compressed, 2–2.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.33–0.5 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface pilose, hairy above, with an apical beard (up to 3mm long). Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2 mm long, chartaceous, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex acute. Palea involute, chartaceous.

Flower and Fruit. Anthers 3, 1.3 mm long.

$2n = 32$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. Annobon, Principe & Sao Tome.

Panicum adenophorum K. Schum. *Engl. Pflanzenw. Ost-Afr.* C 103. (1895).

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

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *F.L. Stuhlmann 2143*, 1894, Tanzania: Seengebiet (Ruhanga) (B, US-1063855). ST: *Stuhlman 2331*, Tanzania: Runssori 2500 m (B).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. aden, gland; phero, bear. The leaf-blades bear gland-tipped hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms rambling, 45–240 cm long, wiry, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 4–11 cm long, 4–13 mm wide. Leaf-blade surface pilose. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–15 cm long. Panicle branches pilose, with clavellate hairs or simple hairs (rarely). Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, glabrous or bearing a few hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 2.5–3(–4) mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex obtuse. Upper glume oblong or ovate, 1 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9–11 -veined, obtuse. Palea of lower sterile floret scabrous. Fertile lemma oblong, dorsally compressed, 2.5–3(–4) mm long, coriaceous, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, coriaceous.

Flower and Fruit. Anthers 3, 2 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa. Burundi, Rwanda, DRC. Tanzania, Uganda. Angola, Malawi, Zambia.

Panicum aequinerve Nees. *Fl. Afr. Austr.* 40. (1841).

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

TYPE from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Drège s.n.*, South Africa: Cape Province (whereabouts uncertain).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (324, Fig 281).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms rambling, slender, 15–70(–100) cm long, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blades lanceolate, parallel-sided, 3–11 cm long, 3–10(–12) mm wide, membranous. Leaf-blade surface glabrous or pilose. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–16(–22) cm long. Primary panicle branches spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 2.5–3.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, dark green (olive), without keels, 5(–7) -veined. Lower glume lateral veins ribbed. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, dark green (olive), without keels, 7 -veined. Upper glume lateral veins ribbed. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, ribbed, pubescent, acute. Fertile lemma oblong, dorsally compressed, 2–3 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Rwanda. Ethiopia (inc. Eritrea). Uganda. Malawi. Limpopo, Mpumalanga, Swaziland, Kwazulu-Natal, Eastern Cape. Madagascar.

Panicum aequivaginatum Swallen. *Contrib. U. S. Nat. Herb.* xxix. 271 (1948).

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

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R.L. Froes 19950*, 15 Mar 1943, Brazil: Bahia: entre Bom Gosto and Olivenção (US-1910768; IT: US-2146782). CS.

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (158, Fig. 57).

Derivation (Clifford & Bostock 2007): *L. aequus*, equal; *vagina*, sheath; *-ata*, possessing. Leaf-sheaths about equal in length.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–100 cm long, rooting from lower nodes. Culm-internodes 3.5–10.5 cm long, distally glabrous or pilose. Culm-nodes constricted, pubescent. Leaf-sheaths 3–8.5 cm long, striately veined, glabrous on surface or hispid, outer margin hairy. Ligule a ciliolate membrane, 0.3–0.6 mm long. Collar pubescent. Leaf-blade base broadly rounded or cordate. Leaf-blades linear or lanceolate, 3.5–12 cm long, 5–13 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or hispid. Leaf-blade margins scaberulous, tuberculate-ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 10–15 cm long, 3–7 cm wide. Primary panicle branches ascending. Panicle axis smooth, glabrous. Panicle branches flexuous, glabrous in axils or pubescent in axils. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, smooth, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.7–2.5 mm long, 0.7 mm wide, falling entire. Rachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, not clasping, 0.9–1.3 mm long, 0.4–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume lateral veins without connecting veins or transversely connected at apex. Lower glume apex acuminate. Upper

glume elliptic, 0.9 length of spikelet, membranous, without keels, 9 -veined. Upper glume lateral veins without cross-veins or transversely connected at apex. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 9 -veined, acute. Palea of lower sterile floret 0.25–0.33 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.6–1.9 mm long, 0.6 mm wide, indurate, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, light brown. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America and Brazil. Brazil North.

Panicum afzelii Sw. *Annot. Bot.* 5. (1829).

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

TYPE from Sierra Leone. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sierra Leone, Africa,.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Adam Afzelius (1750–1837) Swedish botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, slender, 15–30 cm long. Leaf-sheaths glabrous on surface or hirsute. Ligule a ciliolate membrane. Leaf-blades 5–10 cm long, 2–3 mm wide, flaccid. Leaf-blade surface hirsute, sparsely hairy. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, effuse, 7–11 cm long. Panicle branches capillary, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 1.2–1.8 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.75–0.8 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate, awned, 1 -awned, awn 0.3–0.5 mm long. Upper glume oblong, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume apex acuminate, mucous or mucronate.

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 or acuminate. Fertile lemma oblong, dorsally compressed, 0.5–0.8 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.5–0.75 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Burkina, Ghana, Guinea-Bissau, Guinea, Ivory Coast, Sierre Leone.

Panicum alatum Zuloaga & Morrone. *Ann. Missouri Bot. Gard.*, 83(2): 224 (1996).

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: HT: *Wiggins 15160*, 23 Oct 1959, Mexico: Baja California Sur: 15.5 mi S of El Arco, 27° 45'N 113° 20'W (MO; IT: GH, LA, MEXU, SI).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 225, Fig.15 (1996) as var. *alatum*).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 13–95 cm long. Culm-internodes terete, 1.5–10 cm long, distally glabrous or hispid. Culm-nodes glabrous or pubescent. Lateral branches ample, arising from lower culm. Leaf-sheaths 2–7 cm long, glabrous on surface or hirsute, outer margin hairy. Ligule a ciliolate membrane, 0.7–1.8 mm long. Collar glabrous. Leaf-blades erect or ascending, linear or lanceolate, 2–18 cm long, 3–17 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy abaxially. Leaf-blade margins scaberulous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Peduncle 15–30 cm long. Panicle open, pyramidal, effuse, 3.5–23 cm long, 1.5–11 cm wide. Panicle axis scaberulous, glabrous. Panicle branches scaberulous, glabrous. Spikelets

appressed, solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 1–4 mm long, scaberulous, glabrous or 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, acuminate, 2.4–3 mm long, 0.7–0.9 mm wide, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.5 mm long.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, not clasping, 1.2–1.8 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate. Upper glume elliptic, 2.2–2.7 mm long, 1 length of spikelet, membranous, without keels, 7–9(–11) -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 2.1–2.8 mm long, 1 length of spikelet, membranous, 7–9(–11) -veined, acute. Fertile lemma obovate, thickened on margins at base, dorsally compressed, 1.5–1.8 mm long, 0.6–0.9 mm wide, indurate, grey, without keel, more than 3-veined. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.3 mm long. Caryopsis with adherent pericarp, ovoid, 1–1.2 mm long, pallid. Embryo 0.5 length of caryopsis. Hilum punctiform.

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America.** El Salvador, Honduras. Venezuela. Ecuador, Galapagos.

Morelos. Coahuila, Chihuahua, Durango, Guanajuato, Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Baja California, Baja California Sur, Sinaloa, Sonora. Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo.

Panicum albomaculatum Scribn. *U.S. Dept. Agric. Circ. Agrost.* xix. 2. (1900).

Regarded by K as a synonym (*P. commutatum*).

TYPE from Mexico. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *C.G. Pringle 5203*, 10 Oct 1892, Mexico: Michoacán: dry rocky hills, Patzcuaro (US-743918).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. albus*, white; macula, spot; -atum, possessing. Culm sheaths purplish and white-spotted.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms erect, 30–60 cm long. Leaf-sheaths glabrous on surface or hispid, outer margin hairy. Ligule a ciliolate membrane. Leaf-blade base cordate. Leaf-blades linear or lanceolate, tapering towards tip, 7–15 cm long, 6–10 mm wide. Leaf-blade margins scabrous, ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 10–17 cm long. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, flexuous, 8–15 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, 2.7–3.3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.8–1.3 mm long, 0.33–0.4 length of spikelet, membranous, without keels. Lower glume surface pubescent. Lower glume apex obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, pubescent, obtuse. Fertile lemma elliptic, dorsally compressed, 2.7–3.3 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

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

TDWG4. Mexico State, Morelos. Veracruz. Jalisco, Michoacan, Nayarit. Chiapas.

Panicum aldabrense Renvoize. *Kew Bull.* 25(3): 421 (1971).

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

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Aldabra, an island in the Indian Ocean.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Stolons present. Culms weak, 1–5 cm long. Leaves distichous. Leaf-sheaths glabrous on surface or pilose. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades flat or conduplicate or involute, 1–2 cm long, 1–1.5 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, ovate, 0.5–1 cm long, 0.3–0.5 cm wide, bearing few spikelets. 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, subacute, 1–1.3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5–1 mm long, 0.66–1 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, mucous or mucronate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma obovate, dorsally compressed, 1 mm long, indurate, pallid or yellow, without keel, more than 3-veined. Lemma margins convolute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 0.5–0.6 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Aldabra, Seychelles.

Panicum altum Hitchc. & Chase. *Contrib. US. Nat. Herb.* xvii. 488 (1915).

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 Panama. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 8167 [= *Amer. Grass Natl. Herb.* 507], 18 Sep 1911, Panama: Panamá: Point Chamé, moist sandy soil, near sea beach, growing in large masses, the bases straggling and tangled (US-693326; IT: F, G, K, MO-848899, NY, P, W).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (262, Fig. 218).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms decumbent, reed-like, 200–400 cm long, 3–6 mm diam. Culm-internodes glaucous, smooth. Culm-nodes swollen. Lateral branches lacking or sparse, extravaginal. Leaf-sheaths smooth. Ligule a ciliate membrane, 2–3 mm long. Leaf-blades 30–45 cm long, 8–15 mm wide. Leaf-blade surface smooth. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–30 cm long. Primary panicle branches ascending or spreading. Panicle branches scabrous. 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, compressed slightly, 3.2–4 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.66 length of spikelet, membranous, without keels. Lower glume lateral veins prominent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, 1-keeled, 7 -veined. Upper glume lateral veins prominent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 1-keeled, 7 -veined, prominently veined, acute. Fertile lemma elliptic, dorsally compressed, 2–2.2 mm long, 1 mm wide, indurate, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Trinidad-Tobago. Colombia. Brazil Northeast.

Panicum amarum Elliott. *Sketch.Bot. S.Carolina* i. 121. (1816).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *S. Elliott s.n.--specimen A*, Oct, USA: South Carolina (PH; ILT: US-80454 (fragm. ex PH)). LT designated by Palmer, *Brittonia* 27: 148 (1975).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (473 as subsp. *amarum* & *amarulum*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (263, Fig. 219 as *P. amaurulum*).

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

Derivation (Clifford & Bostock 2007): L. unpleasant. Foliage bitter to the taste.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Rhizomes elongated. Culms erect, 30–200 cm long. Culm-internodes glaucous, distally glabrous. Leaf-sheaths without keel. Ligule a ciliate membrane, 2–3.5 mm long. Leaf-blades flat or conduplicate, 10–50 cm long, 3–15 mm wide, glaucous. Leaf-blade surface glabrous. Leaf-blade margins smooth.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 10–35 cm long, 3–10 cm wide, 0.25–0.33 of culm length. Primary panicle branches appressed. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 4.5–6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

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, acuminate. Fertile lemma oblong or ovate, dorsally compressed, 3–3.5 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

Country /Province /State. Northeast USA, South-central USA, Southeastern USA, Mexico. New Mexico, Texas. Florida, Georgia, Louisiana, North Carolina, South Carolina, Virginia. Northeast Mexico, Gulf (Mexico), Southeast Mexico. Mesoamerica, Caribbean. Belize, Honduras. Bahamas, Bermuda, Cuba. Tamaulipas. Veracruz. Chiapas, Tabasco.

Panicum ambongense A. Camus. *Bull. Soc. Bot. France*, 99: 64 (1952).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Manongarivo: Perrier 11208.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 20–35 cm long, 4–5 -noded. Leaf-sheaths striately veined, glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs scanty or ciliate. Ligule a fringe of hairs. Leaf-blades linear, conduplicate, 15–20 cm long, 3–4.5 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 6–30 cm long. Primary panicle branches ascending, 5–10 cm long. Panicle axis scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 2–5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 2–2.1 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, recurved at apex and gaping. Lower glume ovate, clasping, 1.2–1.5 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, keel-less except near apex, 5–7 -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, 6 -veined, obscurely veined, truncate. Fertile lemma elliptic, dorsally

compressed, 1.2–1.5 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum amboisitrense A.Camus. *Bull. Soc. Bot. France*, 72: 370 (1925).

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

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (329, Fig 122).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent or rambling, weak, 100–200 cm long. Lateral branches ample. Leaf-sheaths eglandular. Ligule an eciliate membrane or a ciliolate membrane. Leaf-blades conduplicate or involute, 5–13 cm long, 3–10 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 10–25 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading, 1 -nate, 5–15 cm long. Panicle branches eglandular. 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, 2–2.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute, mucous or mucronate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.8–2.2 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins convolute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum amoenum Balansa. *Morot, Journ. de Bot.* iv. 142. (1890).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, S-L Chen et al, *Flora of China* 22 (Poaceae) (2006).

TYPE from Vietnam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *B. Balansa* 468, LT: *B. Balanasa* 1632, Oct 1885, Vietnam: Mt. Bavi, Lankok Valley (L; ILT: US-1109065). LT designated by Rahman, *Blumea* 34: 173–176 (1989). ST: *Balansa* 470, Oct 1885, Vietnam: Tu-Phap, Hanoi, Langson, dans les bois, les haies (L). ST: *Balansa* 1631, Dec 1886, Vietnam: Tu-Phap, Hanoi, Langson, dens les bois, les haies (L). ST: *B. Balansa s.n.*, Oct 1885, Vietnam: Ha Noi, Ha Noi (L).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 685).

Derivation (Clifford & Bostock 2007): L. beautiful. Attractive in appearance.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 100–180 cm long, without nodal roots or rooting from lower nodes. Culm-nodes glabrous. Leaves cauline. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliolate membrane. Leaf-blade base cordate. Leaf-blades 10–20 cm long, 10–12 mm wide, stiff. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 30–40 cm long. Primary panicle branches whorled at lower nodes. Panicle axis angular, smooth to scaberulous. Panicle branches capillary, scaberulous. 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, subacute, 1.5–1.9 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.9–1.2 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1.2–1.5 mm long, 0.8 length of spikelet, membranous, 3–5 -veined, obtuse. Fertile lemma

oblong or ovate, dorsally compressed, 1.5–1.9 mm long, indurate, pallid, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex obtuse or acute. Palea involute, 1–1.3 mm long, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. **China.** China South Central. **Indian Subcontinent, Indo-China, Malesia.** India, Myanmar, Thailand, Vietnam. Borneo, Malaya.

TDWG4. Yunnan.

Panicum anabaptistum Steud. *Syn. Pl. Gram.* :75 (1854).

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

TYPE from Senegal. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: Leprieur, *herb. Leonorm 54*, Senegal (P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. anabapisto*, rebaptize. The species has been renamed.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect or geniculately ascending, 100–150 cm long. Ligule a ciliate membrane. Leaf-blades 10–30(–40) cm long, 4–6 mm wide, glaucous. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 15–30 cm long. Primary panicle branches 5–10 in number, 1 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acuminate, 3.6–4.3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 0.5–0.66 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 2.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. **West tropical Africa, West-central tropical Africa, Northeast tropical Africa.** Ghana, Ivory Coast, Mali, Mauritania, Nigeria, Senegal. Cameroon. Chad, Sudan.

Panicum andringitrense A.Camus. *Bull. Soc. Bot. France*, 72: 369 (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *Perrier de la Bathie no 10,793*, "Madagascar centr.: massif de l'Andringitra ..." ST: *Perrier de la Bathie no. 13,625*, "Madagascar centr.: massif de l'Andringitra ..." ST: *Perrier de la Bathie no. 14,414*, "Madagascar centr.: massif de l'Andringitra ..." ST: *Pierrier de la Bathie no. 14,550*, "Madagascar centr.: massif de l'Andringitra ...".

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (75: 427, Fig.3 (1988)).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 300 cm long. Culm-internodes terete. Lateral branches ample. Leaf-sheaths smooth, puberulous. Ligule absent. Leaf-blades lanceolate, 3–5 cm long, 3–5 mm wide, stiff. Leaf-blade venation prominent. Leaf-blade surface glabrous. Leaf-blade margins cartilaginous. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–5 cm long, 3–3.5 cm wide. Primary panicle branches ascending, 1–2 -nate. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–5 mm long, tip widened.

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

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate or ovate, 1.3–1.4 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 2 mm long, 0.35 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 2.4 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 2.8–3 mm long.

Distribution (TDWG). Continent. Africa.

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

Panicum ankarensis A. Camus. *Bull. Soc. Bot. France*, 92: 50 (1945).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Ankarana: Humbert 18855 ; Madagascar, Ankarana: Humbert 18989.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, slender, 60–70 cm long. Culm-nodes pubescent. Leaf-sheaths striately veined, glabrous on surface. Ligule an eciliate membrane, truncate. Leaf-blades 20–25 cm long, 6–9 mm wide. Leaf-blade surface glabrous or pilose, hairy abaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–15 cm long. Primary panicle branches ascending, 1 -nate. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 4.2–4.5 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma, gaping. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 3.8 mm long, 0.7–0.8 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 3.5–4 mm long, 1 length of spikelet, membranous, 7 -veined, obtuse. Fertile lemma lanceolate or oblong, dorsally compressed, 3.2–3.5 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum antidotale Genus Retz. *Obs.* 4: 17 (1786).

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 *P. miliare*), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from India. **Basionym or Replaced Name:** *Panicum miliare* Lam., *Illustr.* i. 173. (1791). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Koenig s.n.*, India (LD; IT: K, US).

Illustrations (Books): N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 400), K.M.Matthew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (Pl. 800 as *P.milare*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (314), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (198, Fig. 31), F.W.Gould, *The Grasses of Texas* (1975) (459, Fig. 244).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): L. antidotum, antidote; -ale, pertaining to. Smoke from burning plants used as a disinfectant against smallpox.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Rootstock evident. Rhizomes short. Culms erect or geniculately ascending, 30–180 cm long, woody. Culm-internodes distally pruinose. Culm-nodes swollen, glabrous or pubescent. Lateral branches sparse. Ligule a fringe of hairs. Leaf-blades 6–30 cm long, 2.5–14 mm wide. Leaf-blade midrib conspicuous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate or pyramidal, 13–32 cm long, contracted about primary branches. Primary panicle branches not whorled or whorled at most nodes, 5–15 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long, scaberulous.

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, 2.4–3.2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.6–0.66 length of spikelet, membranous, much thinner on margins, without keels, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, with hyaline margins, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma oblong, dorsally compressed, 1.5–1.75 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1–2 mm long. Caryopsis with adherent pericarp, oblong or ovoid, 0.25 mm long.

$N = 9$ (4 refs TROPICOS), or 14 (1 ref TROPICOS). $2n = 18$ (2 refs TROPICOS).

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Northern Africa, West-central tropical Africa.** Egypt (*). **Western Asia, Arabian Peninsula.** Afghanistan, Iran, Sinai. Gulf States, Kuwait, Oman, Saudi Arabia. **Indian Subcontinent, Indo-China, Malesia.** India, Pakistan, Sri Lanka, West Himalaya. Myanmar, Vietnam. Java, Moluccas, Sulawesi. **Australia.** Western Australia (*), Northern Territory (*), Queensland (*), New South Wales (*). **Southwestern Pacific, Northwestern Pacific, North-central Pacific.** Fiji (*), New Caledonia (*), Samoa (*). Marianas (*). Hawaii (*). **Mexico.** Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico. **Mesoamerica, Western South America, Brazil, Southern South America.** Colombia. Brazil Southeast. Argentina Northwest.

TDWG4. Kerala, Karnataka. Punjab, Tamilnadu, Uttah Pradesh. Kimberley, South-West. Darwin & Gulf, Central Australia. Southern. Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains. Jujuy (*). Tlaxcala. Coahuila, Chihuahua, Zacatecas. Baja California, Sonora. Jalisco, Nayarit.

Panicum aquarum Zuloaga & Morrone. *Novon* 1(4): 185, f. 1–2. (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 Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Delascio, Montes & Davidse 11206*, Dec 1981, Venezuela: Guáico: Parque Nacional Aguaro-Guariquito: Congriales de la Gorra, entre La Esperanza y Mesa de Cambao (HT: VEN; IT: MO-3808442, SI).

Illustrations (Journals): *Novon* (1: 186, Fig. 1 (1992)), *Ann. Missouri Bot. Gard.* (83: 228, Fig.16 (1996)).

Derivation (Clifford & Bostock 2007): L. aqua, water. Habitat aquatic.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 90–130 cm long, rooting from lower nodes. Culm-internodes thin-walled, 7–19 cm long, distally glabrous. Culm-nodes brown, glabrous. Lateral branches ample, arising from upper culm. Leaf-sheaths 8–18 cm long. Ligule a ciliate membrane, 1.2 mm long, pilose on abaxial surface. Collar glabrous. Leaf-blades persistent or deciduous at the ligule, involute, 11–18 cm long, 2–4 mm wide. Leaf-blade surface scaberulous.

Inflorescence. Inflorescence a panicle, terminal and axillary. Peduncle 10–25 cm long, scaberulous above, glabrous. Panicle open, pyramidal, 35–40 cm long, 12–28 cm wide. Panicle branches scaberulous, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 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 elliptic, dorsally compressed, 3–3.9 mm long, 1–1.2 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 1.7–2.7 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Palea of lower sterile floret 1.7–2.1 mm long, 0.5–

0.66 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.1 mm long, indurate, yellow or black, mottled with last colour, shiny, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Palea involute, indurate. Palea apex papillose.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 1.5 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Panicum aquaticum Poir. *Encyc. Suppl.* iv 281. (1816).

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 Puerto Rico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Anon.*, no date, Puerto Rico (P; IT: US-80463 (fragm. ex P)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (254, Fig. 206), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (703 & 708, Fig. 150 7 151), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (354, Fig 129).

Derivation (Clifford & Bostock 2007): L. aqua, water; -ica, belonging to. Growing in or close to water.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 25–200 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse, arising from lower culm. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.6–1.7 mm long. Leaf-blades 6–30 cm long, 4–8 mm wide. Leaf-blade surface glabrous, hairless throughout or except near base.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, ovate, 4–27 cm long. Primary panicle branches ascending, 1 -nate, 2.5–13 cm long. Panicle axis scaberulous. Spikelets appressed, solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present, unequal.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, acute, 2.8–3.4 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 1–1.5 mm long, 0.4–0.5 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -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, 9 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.2–2.3 mm long, 0.9–1 mm wide, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2–1.6 mm long. Caryopsis with adherent pericarp.

$2n = 72$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, and Southern South America. Belize, Costa Rica, Guatemala, Honduras, Nicaragua. Cuba, Leeward Is, Puerto Rico, Trinidad-Tobago. Bolivia, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Veracruz. Colima. Quintana Roo.

Panicum arbusculum Mez. *Engl.Jahrb.* lvii. 187 (1921).

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

TYPE from Namibia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sudwestafrika (coll. ignot. --Herb. Hamburg).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (338, Fig 295), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984).

Derivation (Clifford & Bostock 2007): L. shrub. Shrubby in habit.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 40–80 cm long, woody. Culm-nodes swollen. Lateral branches suffrutescent. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades 5–10 cm long, 3–6 mm wide, glaucous. Leaf-blade surface glabrous or pilose, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–15 cm long, with spikelets clustered towards branch tips. 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, dorsally compressed, subacute, 2.5–3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, obtuse. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.5–3 mm long, indurate, yellow or light brown, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Namibia, Northern Cape.

Panicum arcurameum Stapf. *Prain, Fl. Trop. Afr.* ix. 704 (1920).

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

TYPE from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *F.R.R. Schlechter 4614*, 7 Mar 1894, South Africa: Transvaal (US-1445793).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. arcus*, curve; ramus, branch. Culms radiate from centre and are geniculately ascending.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent, 15–40 cm long. Culm-internodes distally hirsute. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, 5–15 cm long, 5–12 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, ovate, 4–13 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, pilose, acute. Fertile lemma oblong, dorsally compressed, 1.5 mm long, indurate, dark brown, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Namibia, Botswana, Limpopo, Gauteng, Northern Cape.

Panicum arundinariae Trin. ex E. Fourn. *Mexic. Pl.* 2: 25 (1886).

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: ST: *C.J.W. Schiede s.n.*, Absque loco (US-80474 (fragm. ex P)). ST: *Virlett 1302*, Mexico: San Luis Potosí ST: *Liebmann 423*, Mexico: Mirador (US (fragm.)). ST: *Liebmann 424*, Mexico: Consoquitla (US (fragm.)). ST: *Mueller 2018*, Mexico: Orizaba ST: *Schaffner 276*, Mexico: Cordova (P). ST: *Schaffner 279*, Mexico: Cordova (P).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (354, Fig 129).

Derivation (Clifford & Bostock 2007): of *Arundinaria*. With the habit of *Arundinaria*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–80 cm long, 1–1.5 mm diam., without nodal roots or rooting from lower nodes. Culm-internodes distally glabrous. Culm-nodes bearded. Lateral branches ample. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs bearded. Ligule a ciliolate membrane, 0.3–0.8 mm long. Collar bearded. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 4–11 cm long, 4–9 mm wide. Leaf-blade surface glabrous or puberulous, sparsely hairy.

Inflorescence. Inflorescence a panicle. Peduncle 4–17 cm long. Panicle open, ovate, 2–6 cm long, contracted about primary branches. Primary panicle branches 3–5 in number, 0.5–1.5 cm long, 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 elliptic or obovate, dorsally compressed, obtuse, 1.7–1.9 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.5–0.6 mm long, 0.33 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 1.7–1.9 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1.7–1.9 mm long, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, dorsally compressed, 1.5–1.6 mm long, indurate, shiny, without keel. Lemma surface striate, pubescent. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate. Palea surface pubescent, hairy on back.

Flower and Fruit. Anthers 3, 0.7 mm long, orange. Caryopsis with adherent pericarp, ellipsoid, 1.1 mm long, yellow.

$2n = 36$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America.** Costa Rica, El Salvador, Guatemala, Honduras, Panama. Venezuela. Colombia, Ecuador, Galapagos, Peru.

TDWG4. Mexico State. Guanajuato, Queretaro, San Luis Potosi. Veracruz. Colima, Jalisco, Oaxaca. Chiapas.

Panicum assumptionis Stapf. *Kew Bull.* 1919, 140. (1919).

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

TYPE from Mascarenes. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: "Mascarenes: Assumption Island, on rocky ground, ...", *Dupont 110*.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. from Assumption Island, Indian Ocean.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms decumbent, 7–12 cm long, 0.5–0.75 mm diam., wiry. Ligule a ciliate membrane. Leaf-blades 2–5 cm long, 1.5–3 mm wide.

Inflorescence. Synflorescence compound, fasciculate.

Inflorescence a panicle, comprising 3–8 fertile spikelets, terminal and axillary, subtended by a spatheole, enclosed. Spatheole lanceolate, 1–1.5 cm long. Panicle open, linear or oblong, 0.5–1 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose or simple. 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 ovate, dorsally compressed, 1–1.3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. 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, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1–1.3 mm long, indurate, light brown, without keel, more than 3-veined. Lemma margins convolute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Aldabra, Madagascar, Seychelles.

Panicum assurgens Renvoize. *Kew Bull.*, 37(2): 325 (1982).

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

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Harley et al.* 15229, 18 Jan 1972, Brazil: Bahia, Serra do Rio de Contas, on road to Abaira, ca. 8 km to north of the town of Rio de Contas, 1000 m (CEPEC; IT: K, MO-3663763, NY, US-2955120).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (168, Fig. 61).

Derivation (Clifford & Bostock 2007): *L. assurgo*, rise up into the air. Scandent in habit.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms arching, 100–200 cm long. Culm-internodes 4–10 cm long, distally glabrous. Culm-nodes constricted, glabrous. Leaf-sheaths 3–7 cm long, striately veined, hispid, outer margin hairy. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades linear or lanceolate, 8–12 cm long, 7–10 mm wide. Leaf-blade surface hispid, sparsely hairy. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 12–15 cm long, 7–10 cm wide. Primary panicle branches whorled at lower nodes. Panicle branches flexuous, eglandular, glabrous, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3.3 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate or ovate, not clasping, 2.1–2.7 mm long, 0.75–0.8 length of spikelet, membranous, without keels, 3 -veined. Lower glume lateral veins transversely connected at apex. Lower glume apex acute. Upper glume elliptic, 0.8 length of spikelet, membranous, without keels, 9 -veined. Upper glume surface glabrous to pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 9 -veined, glabrous or pubescent, acute. Palea of lower sterile floret 0.66 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.7 mm long, 1 mm wide, indurate, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 2.1 mm long.

$N = 9$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Bahia.

Panicum atosanguineum Hochst. ex A.Rich. *Tent. Fl. Abyss.* ii. 375 (1850).

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 Ethiopia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *G.H.W. Schimper* 1709, 13 Aug 1840, Ethiopia: prope Djeladjeranne (P; IT: K, L, LE, US-1127121).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (205, Fig 85), N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (323, Fig 36).

Derivation (Clifford & Bostock 2007): *L. ater*, dark; sanguineus, red. Spikelets purplish-brown.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms 10–40 cm long. Leaf-sheaths hispid. Ligule a ciliolate membrane. Leaf-blades lanceolate, parallel-sided, 6–14 cm long, 5–14 mm wide. Leaf-blade surface hispid or pilose, with tubercle-based hairs. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 6–20 cm long. Primary panicle branches spreading. Panicle branches capillary. 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, acuminate, 1.8–2.2 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma oblong, dorsally

compressed, 1.5–2 mm long, indurate, dark brown to black, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

Country /Province /State. West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Rwanda, DRC. Eritrea, Ethiopia (inc. Eritrea), Socotra, Somalia, Sudan. Kenya, Tanzania, Uganda. Zambia, Zimbabwe. Botswana. **Arabian Peninsula.** Oman, Saudi Arabia. **Indian Subcontinent, Indo-China.** Pakistan. Andaman Is, Thailand.

TDWG4. Assam. Andhra Pradesh, Bihar. Madhya Pradesh, Tamilnadu, West Bengal.

Panicum aureoglume Judz. ms.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Distribution (TDWG). Continent. Africa.

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

Panicum auritum Hassk., non Nees(1829). *Pl. Jav. Rar.* 22 (1848).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from The Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Philippine Islands: Luzon:, *Haenke s.n.* (LT: PR; ILT: LE, MO, W).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (691, Fig. 38), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (97, Fig. 97), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 716).

Derivation (Clifford & Bostock 2007): *L. auritus*, long-eared. Leaf-blades auricled.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms robust, 100–200 cm long. Ligule an eciliate membrane. Leaf-blade base cordate. Leaf-blades 20–60 cm long, 7–35 mm wide. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, lanceolate, 30–35 cm long, contracted about primary branches. Primary panicle branches 2–8 cm long, bearing spikelets almost to the base. Panicle branches secund. Spikelets appressed, 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 lanceolate, dorsally compressed, acute, 2–2.6 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2.2 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex acuminate. Palea involute, indurate.

Flower and Fruit. Anthers 2, 1 mm long.

$2n = 30$ (1 ref TROPICOS).

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

Country /Province /State. **China.** China South Central, Hainan, China Southeast. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Eastern Himalaya, India, Sri Lanka. Andaman Is, Laos, Myanmar, Thailand, Vietnam. Java, Malaya, Singapore, Philippines. New Guinea.

TDWG4. Fujian, Guangdong. Yunnan. Bhutan, Sikkim. Assam, Nagaland. Kerala.

Panicum aztecanum Zuloaga & Morrone. *Ann. Missouri Bot. Gard.*, 83(2): 229 (1996).

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: HT: *G.B.Hinton 2010*, 7 Oct 1932, Mexico: México: Temascaltepec, Bejucos, barranca, 610 m (US-1840771; IT: MEXU, MO, NY).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 230, Fig.17 (1996)).

Derivation (Clifford & Bostock 2007): *L. anum*, indicating connection. From Mexico, that is the land of the Aztecs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–100 cm long. Culm-internodes terete, 13–16 cm long. Culm-nodes glabrous. Leaf-sheaths 2–10 cm long, mostly shorter than adjacent culm internode, glabrous on surface or pilose, outer margin glabrous. Leaf-sheath oral hairs ciliate, 2–3.6 mm long. Ligule a ciliate membrane, 0.4–0.6 mm long. Collar glabrous or pubescent. Leaf-blades filiform or linear, involute, 14–30 cm long, 1–3 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially or on both sides. Leaf-blade margins scaberulous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Peduncle 25–48 cm long, glabrous. Panicle open, pyramidal, effuse, 15–18 cm long, 8–10 cm wide. Panicle axis glabrous. Panicle branches glabrous 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 elliptic, dorsally compressed, acute, 3.7–4.5 mm long, 1.5 mm wide, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.5 mm long.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, not clasping, 2–3 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 7 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate. Upper glume elliptic, 3.2–4.2 mm long, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 3–4 mm long, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 1.7–2.7 mm long. Fertile lemma ovate, dorsally compressed, 2.4–3 mm long, 0.9–1.2 mm wide, indurate, yellow, shiny, without keel, 7 -veined, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.3 mm long. Caryopsis with adherent pericarp, ovoid, 1.8 mm long, pallid. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northwest Mexico, Southwest Mexico.

TDWG4. Distrito Federal, Mexico State. Sinaloa. Jalisco, Michoacan.

Panicum bambusiculme Friis & Vollesen. *Kew Bull.*, 37(3): 475 (1982).

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

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms rambling or scandent, 100–200 cm long, woody. Culm-internodes distally glabrous. Lateral branches ample. Leaf-sheaths tight, 3.5–4.5 cm long, striately veined, pilose. Ligule a ciliate membrane, 0.5–1 mm long. Leaf-blades lanceolate, 9.5–22 cm long, 19–34 mm wide, stiff. Leaf-blade midrib conspicuous. Leaf-blade venation with 6–10 secondary veins, with obscure cross veins. Leaf-blade surface glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, globose, effuse, 22–32 cm long. Primary panicle branches spreading. Panicle branches stiff, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 30–60 mm long, smooth.

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, 2.5–3 mm long, 1.4–2 mm wide, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2.5–3 mm long, 1 length of spikelet, membranous, without keels, 9 -veined. Lower glume surface puberulous. Lower glume apex obtuse. Upper glume ovate, 2–2.5 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 2 mm long, 0.75 length of spikelet, membranous, 3–5 -veined, pubescent, obtuse. Fertile lemma ovate, dorsally compressed, 2.5 mm long, indurate, dark brown, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex pubescent. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa. Sudan.

Panicum bambusiusculum Stapf. *Kew Bull.* 1919, 267. (1919).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, *Gerrard 75* (HT: not designated).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ula*, diminutive. Resembling in habit a dwarf *Bambusa*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 100–200 cm long, 15 mm diam., rooting from lower nodes. Culm-internodes terete. Lateral branches fastigiate. Leaf-sheaths 1.5–2.5 cm long, outer margin hairy. Ligule an eciliate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 2–6 cm long, 5–7 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 1.5–2 cm long, 1 cm wide, bearing few spikelets. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–2 mm long, tip discoid.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or oblong, dorsally compressed, acuminate, 1.8 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.5 mm long, 0.8 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 surface pubescent, with tubercle-based hairs. 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, pubescent, with tubercle-based hairs, acute. Fertile lemma elliptic, dorsally compressed, 1.2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 0.8 mm long.

Distribution (TDWG). Continent. Africa.

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

Panicum bathiei A.Camus. *Bull. Soc. Bot. France*, lxxiii. 977 (1927).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar: bois Firingalava; Bemarivo., *Perrier 501, 11281* (ST: not designated) LT by Bosser & Florens (1999), *Perrier 11281*: LT: P; ILT: P.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Joseph Marie Henri Alfred Perrier de la Bathie (1873–1958) French botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 300–400 cm long, woody (below) or firm (above). Culm-internodes distally glabrous. Lateral branches ample. Leaf-sheaths striately veined, glabrous on surface, outer margin hairy. Ligule a ciliate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 12–14 cm long, 8–10 mm wide, stiff. Leaf-blade surface glabrous or pilose, hairy abaxially. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, effuse, 10–15 cm long. Primary panicle branches ascending. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 10–30 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular, dorsally compressed, 2.9–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2.5 mm long, 0.8–0.9 length of spikelet, membranous, without keels, 7 -veined. Lower glume surface pilose. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 11 -veined. Upper glume surface hirsute. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 11 -veined, pubescent, obtuse. Palea of lower sterile floret 2–7 mm long. Fertile lemma ovate, dorsally compressed, 2 mm long, indurate, light brown, shiny, without keel. Lemma surface glabrous. Lemma margins involute. Lemma apex acuminate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum bechuanense Brem. & Oberm. *Ann. Transvaal Mus* 16: 403 (1935).

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

TYPE from Botswana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. Van son 28611*, 24 Mar 1930, Botswana: Kuke Pan (PRE; IT: US-1614994).

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths pubescent. Culms 60–120 cm long. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades 15–25 cm long, 2–6 mm wide. Leaf-blade surface hispid, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or oblong, 17–26 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.5–3(–3.5) mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.33 length of spikelet, membranous, without keels, 1(–3) -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -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, 5–7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–3 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Angola, Zimbabwe. Namibia, Botswana.

Panicum beecheyi Hook. & Arn. *Bot. Beech. Voy.* 100. (1841).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from USA, Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *F.W. Beechey s.n.*, 1826, Hawaii (US-80484 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Frederick William Beechey (1796–1856) English Naval Officer.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–60 cm long. Culm-internodes distally glabrous or pubescent. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaves cauline. Leaf-sheaths glabrous on surface or puberulous. Ligule a ciliate membrane, 0.7–1.8 mm long. Leaf-blades flat or convolute, 10–18 cm long, 2–5 mm wide. Leaf-blade surface glabrous or puberulous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–18 cm long. Primary panicle branches spreading. Panicle axis scabrous. Panicle branches scabrous. 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, dorsally compressed, acuminate, 2.4–3.4 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.9 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume surface pilose. Lower glume hairs 1.2–2.5 mm long. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume surface villous. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous, acute. Palea of lower sterile floret 0.25 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.7–1.9 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1–1.3 mm long. Caryopsis with adherent pericarp.
Distribution (TDWG). Continent. Pacific.
Country /Province /State. North-central Pacific. Hawaii.

Panicum belmonte Renvoize. *Kew Bull.*, 37(2): 325, f. 4. (1982).

Regarded by K as a synonym (*P. aequivaginatum*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Harley et al.* 17383, 24 Mar 1974, Brazil: Bahia, Coastal Zone, 25 km SW of Belmonte, on road to Itapebí (CEPEC; IT: K, MO-3663768, US-2955112).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (175, Fig. 65 as *Panicum belmonte*).

Derivation (Clifford & Bostock 2007): L. from Belmonte, Bahia, Brazil.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual or perennial, short-lived. Rhizomes elongated. Culms geniculately ascending, 20–80 cm long, rooting from lower nodes. Lateral branches sparse, arising from lower culm. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades erect or ascending, linear or lanceolate, 2.5–10 cm long, 3–18 mm wide, stiff. Leaf-blade surface pilose, sparsely hairy. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–12 cm long. Primary panicle branches profusely divided. Panicle branches tangled. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 1.7–2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.7–2 mm long, indurate, pallid, without keel. Lemma surface scaberulous. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4. Bahia.

Panicum bergii Arechav. *Anal. Mus. nac. Montevid.* 2: 147 (1894).

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 Uruguay. **Basionym or Replaced Name:** *Panicum pilcomayense* Hack., *Bull. Herb. Boiss. Ser.* 2, 7: 449 (1907). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Arechavaleta s.n.*, Uruguay: Montevideo: Campos de San José, Florida, Mercedes, etc. (MVM; IT: US-974426, W).

Recent Synonyms: *Panicum pilcomayense* Hack., *Bull. Herb. Boiss. Ser.* 2 7. 449 (1907).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (465), S.A.Renvoize, *Gramineas de Bolivia* (1998) (135, Fig. 83), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (307, Fig. 124 & 306, Fig. 123 as *P. pilcomayense*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (560, Fig. 148 and *p. pilcomayense*), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (529, Fig. 356 & as *P. pilcomayense*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (217, Fig. 59), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (332, Fig. 140 & as *P. pilcomayense*).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 232, Fig.18 (1996)).

Derivation (Clifford & Bostock 2007): in honor of Frederico Guillermo Carlos Berg (1843–1902) Russian-born Argentinian botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–60 cm long. Culm-nodes purple, bearded. Leaf-sheaths hirsute. Ligule a ciliate membrane. Leaf-blades 10–37 cm long, 1–6 mm wide. Leaf-blade surface hirsute, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, deciduous as a whole. Peduncle fracturing. Panicle open, pyramidal, effuse, 10–20 cm long, 0.33 of culm length. Primary panicle branches spreading, whorled at lower nodes,

branching divaricately. 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 ovate, dorsally compressed, acute, 2.5–2.8 mm long, falling entire.

Glumes. Glumes dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma ovate, dorsally compressed, 1.5–1.8 mm long, indurate, pallid or grey, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers purple. Caryopsis with adherent pericarp, ovoid, 1.1–1.2 mm long.

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

Country /Province /State. South-central USA. Texas. **Northern South America, Western South America, Brazil, Southern South America.** Guyana, Bolivia, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.

TDWG4. Roraima, Minas Gerais, Rio de Janeiro, Espirito Santo, Catarina, Rio Grande do Sul. Jujuy, Santiago del Estero, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Formosa, La Pampa, Misiones, Santa Fe.

Panicum beyeri Hitchc. & Ekman. *U. S. Dept. Agric., Misc. Publ. No. 243*: 265 (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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman 15045*, 8 Sep 1922, Cuba: Oriente (US-1387466; IT: US-1720519).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (266, Fig. 225).

Derivation (Clifford & Bostock 2007): in honor of M. K. Beyer (fl. 1922) Norwegian traveller in Cuba.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms geniculately ascending or decumbent, slender, 50–130 cm long, wiry. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades flat or involute, 20–40 cm long, 0.5–1.5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 20–35 cm long, bearing few spikelets. Primary panicle branches appressed, distant, simple, 0.5–1.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, tilted on the pedicel, dorsally compressed, acute, 3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, parallel to lemmas or gaping. Lower glume ovate, 1 mm long, 0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, dorsally compressed, 2.5 mm long, indurate, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins involute. Lemma apex acute, scabrous. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Panicum bicuspidatum A. Camus. *Bull. Soc. Bot. France*, 99: 64 (1952).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Ankarana: Humbert 18855.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Rhizomes short. Culms erect, robust, 120 cm long. Culm-internodes striate, distally glabrous. Leaf-sheaths striately veined, glabrous on surface. Ligule an eciliate membrane. Leaf-blades linear, 15–17 cm long, 6 mm wide. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, loose, 25–30 cm long. Primary panicle branches ascending, 1-nate, 7–8 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–4 mm long, tip widened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, 3–3.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, recurved at apex and gaping. Lower glume ovate, clasping, 1–1.2 mm long, 0.33 length of spikelet, membranous, without keels, 3-veined. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7-veined. Upper glume lateral veins prominent. Upper glume surface asperulous. Upper glume apex cuspidate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate or ovate, 1 length of spikelet, membranous, scaberulous, cuspidate. Fertile lemma lanceolate, dorsally compressed, 2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum bisulcatum Thunb. *Nov. Act. Soc. Sc. Upsal.* vii. 141 (1815).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), N.Tsvelev, *Grasses of the Soviet Union* (1983), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Thunberg s.n.*, 1818, (UPS).

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (301, Fig. 115), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (550), C-C Hsu, *Taiwan Grasses* (1975) (570, Fig. 1435), 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) (489), N.Walsh & T.Entwistle, *Flora of Victoria Vol 2* (1994) (589, Fig. 119), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (314), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (195, Fig. 30), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 711), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:73(1980)).

Images: K.Domin, *Bibliotheca Botanica* 85 (1915) (317, Fig.73 as *P. melananthum*).

Derivation (Clifford & Bostock 2007): L. bis, twice; sulcus, furrow. With two furrows as of glumes and lemmas.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Basal innovations extravaginal. Culms decumbent, 30–50 cm long, compressible or firm, 3–6-noded, rooting from lower nodes. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 0.5–0.75 mm long. Leaf-blades 2–15 cm long, 4–13 mm wide, light green. Leaf-blade midrib prominent beneath. Leaf-blade surface smooth or scaberulous. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–20 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading, 1–2-nate, profusely divided. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.4–3 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, compressed slightly, acute, 2.4–3 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, 3–5-veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5-veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5-veined, smooth or scaberulous, acute. Fertile

lemma elliptic, dorsally compressed, 2 mm long, indurate, pallid or light brown, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse or acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, oblong, black. Embryo 0.4 length of caryopsis.

$2n = 36$ (1 ref TROPICOS).

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

Country /Province /State. Russian far east, **China, Eastern Asia.** Primorye. China South Central, Hainan, Manchuria, China North-Central, China Southeast. Japan, Korea, Nansei-Shoto, Taiwan. **Indian Subcontinent, Indo-China, Malesia.** India. Vietnam. Philippines, Sulawesi. **Australia.** Queensland, New South Wales, Victoria.

TDWG4. Shandong. Anhui, Fujian, Guangdong, Guangxi, Henan, Hunan, Jiangsu, Zhejiang. Hubei, Sichuan, Yunnan. Sikkim. Assam, Manipur, Meghalaya, Nagaland. South East. Coast, Western Slopes.

Pilger Panicoids (as *P. acroanthum*).

Panicum bombycinum B.K.Simon. *Austrobaileya*, 3(4): 594 (1992).

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>: *vide* TROPICOS and Kew Synonymy Database: Australia: Queensland: South Kennedy Dist.: 27 km W of Mirtna HS, 21.18.46S 145.57.47E, open savanna woodland, recently burned, dominated by *Eucalyptus whitei*, with *E. papuana* and *E. brachycarpa* on sandy soil, 6 Apr 1992, *E. J. Thompson & B. K. Simon BUC 1418* (HT: BRI-AQ560012; IT: AD, B, BRI, CANB, DNA, K, L, MEL, MO, NSW, PERTH, US).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. bombyx*, silk; -inus, belonging to. Inflorescence or leaves invested with long silky hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–35 cm long, 2–4 -noded. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, without keel, pubescent. Ligule a ciliate membrane, 1.5 mm long. Leaf-blades flat or involute, 9–21 cm long, 2–4 mm wide. Leaf-blade surface pubescent, densely hairy. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 6–12 cm long. Primary panicle branches spreading, 3–6 cm long, bearing 3–5 fertile spikelets on each lower branch. Panicle axis scabrous, bearing deciduous branches. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 5–20 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3–3.5 mm long, 1–1.5 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.7–2 mm long, 0.5–0.6 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, acuminate. Fertile lemma elliptic, dorsally compressed, 2–2.3 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. **Australia.** Queensland.

North, Central.

Panicum boscii Poir. *Encyc. Suppl.* iv. 282 (1816).

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

TYPE from USA. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *L.A.G. Bosc s.n.*, no date, USA: North Carolina or South Carolina (US-2808893 (fragm. & photo)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Louis Augustin Guillaume Bosc (1759–1828) French botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 40–70 cm long. Culm-internodes distally glabrous or pubescent. Culm-nodes bearded. Lateral branches ample, arising from mid culm. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface. Ligule absent. Leaf-blade base cordate. Leaf-blades spreading, lanceolate, 7–12 cm long, 15–30 mm wide. Leaf-blade surface glabrous. Leaf-blade margins tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 6–12 cm long. Primary panicle branches ascending. 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, dorsally compressed, 4–4.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface pilose. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pilose, with tubercle-based hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, pilose, with tubercle-based hairs, acute. Fertile lemma elliptic, dorsally compressed, 4–4.5 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. $2n = 18$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America.

Country /Province /State. North-central USA, Northeast USA, and South-central USA, Southeastern USA. Illinois, Missouri, Oklahoma, Wisconsin. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia.

Panicum brasiliense Franch. *Mem. Soc. Hist. Nat. Autun*, viii. 341 (1895).

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

TYPE from DRC. **Basionym or Replaced Name:** *Panicum pubiglume* Stapf, *Fl. Trop. Afr.* 9:670 (1920). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Thollon 876*, Congo (P; IT: K).

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths or fibrous dead sheaths. Culms erect or geniculately ascending, slender, (20–)60–80(–85) cm long. Leaves mostly basal. Ligule a ciliate membrane. Leaf-blades parallel-sided, conduplicate or involute, 10–20(–25) cm long, 1–3 mm wide, stiff. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 3–15(–20) cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or orbicular, dorsally compressed, 1.2–1.7 mm long, falling entire, readily shedding fertile florets.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface glabrous (rarely) or pubescent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous (rarely) or pubescent. 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, glabrous (rarely) or pubescent, acute. Fertile lemma oblong, dorsally compressed, 1.2–1.7 mm long, chartaceous, pallid, without keel, more than 3-veined. Lemma surface tuberculate (verruculose). Lemma margins involute. Lemma apex obtuse. Palea involute, chartaceous. Palea surface tuberculate (verruculose).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa. Ghana, Guinea, Mali, Nigeria, Senegal, Togo. Congo. Tanzania, Uganda. Angola, Mozambique, Zambia, Zimbabwe.

Panicum bullockii Renvoize. *Kew Bull.*, 44(3): 543 (1989).

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

TYPE from Zambia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Zambia: Kasama, Chisimbibia Falls, 25 km WNW of Kasama, 28 Feb 1970, *Drummond & Williamson 10092* (HT: SRGH; IT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Arthur Allman Bullock (1906–1980) English botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms geniculate ascending or decumbent, 20–40 cm long. Ligule a ciliate membrane. Leaf-blades lanceolate, 2.5–7 cm long, 4–10 mm wide. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 5–7.5 cm long. Panicle branches pilose, with simple hairs or clavellate hairs. 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, obtuse, 2.5–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, obtuse. Fertile lemma oblong, dorsally compressed, 2.5–3 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Panicum buncei F. Muell. ex Benth. *Fl. Austral.* vii. 487. (1878).

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>: *vide* TROPICOS and Kew Synonymy Database: Queensland. Bokhara Flats, Leichhardt.", *Leichhardt s.n.*

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (458, Fig 389), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (314), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (198, Fig. 31), 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 Daniel Bunce (1813–1872) Australian nurseryman and Garden's Curator.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Basal innovations extravaginal. Culms slender, 30–80 cm long, 3–4 -noded. Culm-nodes glabrous or pubescent. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.75 mm long. Leaf-blades flat or conduplicate or involute, 10–20 cm long, 1.5–5 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy abaxially, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, nodding, 7–30 cm long. Primary panicle branches ascending or spreading, 1–2 -nate, profusely divided, 5–17 cm long. Panicle branches capillary, glabrous in axils. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 1–3 mm long, tip cupuliform.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, dorsally compressed, acute or acuminate, 3–4.5 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, gibbous, 0.25–0.33 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume lateral veins obscure.

Lower glume apex obtuse. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume lateral veins prominent. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, prominently veined, acute. Palea of lower sterile floret 0.75 length of lemma. Fertile lemma elliptic or oblong, dorsally compressed, 1.7–2 mm long, indurate, pallid or light brown, shiny, without keel, 7 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.25 mm long. Caryopsis with adherent pericarp.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** South Australia, Queensland, New South Wales.

Southern. Central, South East, Inland. Western Slopes, Western Plains.

Panicum caatingense (Hitchc. & Chase) Gould. *Madrono* 10:94 (1949).

Regarded by K as a synonym (*P. stramineum*).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Harley et al.* 16384, 6 Feb 1974, Brazil: Bahia: 41 km N of Senhor do Bonfim on the BA-130 highway to Juazeiro (MO-3663766).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (165, Fig. 60).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 30–60 cm long. Ligule a ciliate membrane. Leaf-blades 10–32 cm long, 6–10 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–23 cm long, contracted about secondary branches. Primary panicle branches spreading, moderately divided. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 2.2–3 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, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2.2–3 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4. Bahia, Maranhao, Piaui.

Panicum calcicola A. Camus. *Bull. Soc. Bot. France*, 94: 39 (1947).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Montagne des Francais: Perrier 16209.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent, 30–35 cm long, rooting from lower nodes. Culm-internodes striate, distally glabrous. Lateral branches ample. Leaf-sheaths striately veined, outer margin hairy. Ligule an eciliate membrane, 3 mm long. Leaf-blades lanceolate, 5–9 cm long, 8–23 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse. Panicle axis hirsute. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flexuous, 5–15 mm long, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 1.5 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.8 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface puberulous. Upper glume lanceolate, 1–1.2 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1.4 mm long, 1 length of spikelet, membranous, 5 -veined, puberulous, obtuse. Fertile lemma lanceolate, dorsally compressed, 1.3–1.5 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum callosum Hochst. ex A. Rich. *Tent. Fl. Abyss.* ii. 374 (1844).

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

TYPE from Ethiopia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ethiopia, Tu, Djeladjeranne, 29 Aug. 1840, *Schimper, in pl. Schimp. Abyss., sect. III 1713* (IT: K) validly described on label.

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (203, Fig 84), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (24, Fig. 13).

Derivation (Clifford & Bostock 2007): L. hard-skinned. Florets in some way thickened.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 50–100 cm long, 3 -noded. Lateral branches lacking. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 1 mm long. Leaf-blades tapering towards sheath, 30–45 cm long, 6–10 mm wide. Leaf-blade surface glabrous or pubescent, sparsely hairy. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 15–40 cm long. Primary panicle branches profusely divided, 15–30 cm long. Panicle branches capillary. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 6–8 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acuminate, 6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.75 length of spikelet, membranous, without keels, 7 -veined. Lower glume apex acuminate, mucronate. Upper glume oblong, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acuminate or laterally pinched.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 9 -veined, acuminate. Fertile lemma elliptic, dorsally compressed, 4 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, Northeast tropical Africa. Ethiopia (inc. Eritrea), Sudan.

Panicum calocarpum Berhaut. *Mem. Soc. Bot. France*, 1953–54, 11 (1954).

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

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 50–75 cm long, 4–5 -noded. Ligule an eciliate membrane. Leaf-blades 3–13 cm long, 2–3 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, effuse, 8–12 cm long. Primary panicle branches 3–8 cm long. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 4–15 mm long.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.75–0.8 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 obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface striate. Lemma margins involute. Lemma apex acute, papillose. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Senegal.

Panicum calvum Stapf. *Prain, Fl. Trop. Afr.* ix. 723 (1920).

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

TYPE from Kenya. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Dummer* 3727, Uganda: "Mt. Elgon, ..." (K).

ST: *Batiscombe* 685, Kenya: "British East Africa: ..." (K).

ST: *Scott Elliott* 7647, Uganda: "Nile Land. Uganda: Ruwenzori ..." (K).

ST: *Scott Elliot* 7686, Uganda: "Nile Land. Uganda: Ruwenzori ..." (K).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (208, Fig 86).

Derivation (Clifford & Bostock 2007): L. bald. Racemes glabrous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, slender, 20–150 cm long, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades lanceolate or ovate, 6–12 cm long, 5–25 mm wide, membranous. Leaf-blade venation without cross veins or with distinct cross veins. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or pyramidal, (10–)15–20(–30) cm long. Primary panicle branches spreading. Panicle branches capillary. 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, 2–2.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.33–0.66 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, (5–)7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa. Ivory Coast. Cameroon, Rwanda, DRC. Ethiopia (inc. Eritrea). Kenya, Tanzania, Uganda.

Panicum campestre Nees ex Trin. *Gram. Panic.* 197. (1826).

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: IT: *F. Sellow* s.n., Brazil (LE-TRIN-0613.01).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (150, Fig. 53).

Derivation (Clifford & Bostock 2007): L. of the field. Uncultivated.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 30–74 cm long, without nodal roots or rooting from lower nodes. Culm-internodes 3–10 cm long, distally glabrous or hirsute. Culm-nodes bearded. Lateral branches ample. Leaf-sheaths 3–7 cm long, mostly shorter than adjacent culm internode, hirsute, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 1.5–2.5 mm long. Collar pubescent. Leaf-blade base broadly rounded. Leaf-blades linear or lanceolate, 7–25 cm long, 5–7 mm wide.

Leaf-blade midrib evident. Leaf-blade surface hirsute, densely hairy, hairy on both sides. Leaf-blade margins scabrous, ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences intermingled with terminal. Panicle open, oblong, effuse, 5–15 cm long. Primary panicle branches spreading, branching divaricately. Panicle axis scabrous. Panicle branches stiff, scabrous, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.6–2.8 mm long, 1–1.2 mm wide, falling entire. Floret callus evident, 0.2–0.5 mm long.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.8–2.2 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 5–9 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, glabrous or pubescent, acuminate. Fertile lemma elliptic, dorsally compressed, 1.8–2 mm long, indurate, pallid, without keel, 7 -veined, more than 3-veined. Lemma surface glabrous or pubescent. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, 1.2–1.3 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South.

TDWG4. Para, Amapa, Mato Grosso, Goias, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana.

***Panicum capillare* L. *Sp. Pl.* 58. (1753).**

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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), T.G.Tutin et al, *Flora Europaea* 5 (1980), N.Tsvelev, *Grasses of the Soviet Union* (1983), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *J. Clayton 454*, USA: Virginia (BM; ILT: US-80553 (fragm.& photo ex BM)). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 118 (1908).

Illustrations (Books): N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 399), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (459, Fig 390 as var. *brevifolium*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (589, Fig 119 as var. *capillare*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (315), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), K.F.Best, et al, *Prairie Grasses* (1971) (169), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (458 as subsp. *capillare* & *hillmanii*), F.W.Gould, *The Grasses of Texas* (1975) (446, Fig. 237), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (256, Fig. 208), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (287, Fig.110), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (560, Fig. 148), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (529, Fig 358), B.Rosengurt, *Gramineas Uruguayas I* (1970), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:78(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. capillis*, a hair; -are, pertaining to. Inflorescence with filiform branches.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 20–80 cm long. Culm-nodes bearded. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, 7–30 cm long, 5–14 mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, deciduous as a whole. Panicle open, oblong or ovate, effuse, 15–50 cm long. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, acute or acuminate, 1.8–2.5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse to acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, pallid or yellow, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$N = 9$ (1 ref TROPICOS). $2n = 18$ (5 refs TROPICOS).

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

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

Country /Province /State. : Great Britain (*). : Czechoslovakia, Germany, Hungary, Poland, Switzerland. : France, Portugal, Spain, Azores. : Italy, Romania. Estonia, Latvia, Lithuania, Central European Russia, East European Russia, South European Russia, Northwest European Russia, Ukraine. **Northern Africa, Macaronesia.** Azores, Canary Is, Madeira. Russian far east, **Caucasus, Western Asia.** Primorye. **Indian Subcontinent.** Pakistan (*). **Australia, New Zealand.** Western Australia (*), South Australia (*), New South Wales (*), A.C.T. (*), Victoria (*), Tasmania (*). New Zealand North I, New Zealand South I. **Southwestern Pacific.** Hawaii (*). **Western Canada, Eastern Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Alberta, British Columbia, Manitoba, Saskatchewan. Ontario, Quebec. Colorado, Idaho, Montana, Oregon, Washington, Wyoming. Illinois, Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Arizona, California, Nevada, Utah. New Mexico, Texas. Alabama, Arkansas, Delaware, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Northeast Mexico. **Caribbean, Brazil, Southern South America.** Bermuda, Jamaica, Leeward Is, Trinidad-Tobago. Brazil South. Argentina Northeast, Argentina South, Argentina Northwest, Chile Central, Chile South, Uruguay.

TDWG4. South-West. Southern. Coast, Tablelands, Western Slopes, Western Plains. Jujuy, San Luis. Buenos Aires, Entre Rios, La Pampa. Neuquén, Río Negro. Coquimbo, Valparaiso, Santiago, O'Higgins, Biobio, La Araucania. Los Lagos. Neuvo Leon, San Luis Potosi, Tamaulipas.

Panicum capillarioides Vasey. *Contrib U. S. Nat. Herb.* i.:54 (1890).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.C. Nealley 634*, 189-, USA: Texas: Cameron Co.: Point Isabel, in the region of the Rio Grande (US-76925; IT: US-953165 (probable)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (465), F.W.Gould, *The Grasses of Texas* (1975) (472, Fig. 252).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to *Panicum capillaris*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms erect or geniculately ascending, 30–60 cm long. Culm-internodes distally glabrous or pubescent. Culm-nodes pubescent. Leaf-sheaths hirsute, outer margin glabrous or hairy. Ligule a fringe of hairs, 1.5 mm long. Leaf-blades 20–50 cm long, 2–12 mm wide, stiff. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle open, oblong, effuse, 10–30 cm long, bearing few spikelets, with spikelets clustered towards branch tips. Primary panicle branches ascending or spreading. Panicle branches stiff, scabrous, pubescent 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 lanceolate, dorsally compressed, acuminate, 5–6.5 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 9 -veined, acuminate. Fertile lemma elliptic, dorsally compressed, 1.6–1.8 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA, Mexico. Texas. Northeast Mexico. Neuvo Leon, San Luis Potosi, Tamaulipas.

Panicum capuronii A. Camus. *Bull. Soc. Bot. France*, 103: 613 (1957).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Ankaoso: Humbert 29717.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, weak, 6–12 cm long, 2–4 -noded. Culm-nodes bearded. Leaf-sheaths mostly shorter than adjacent culm internode, outer margin hairy. Ligule a ciliate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate or ovate, 2.5–3.5 cm long, 6–9 mm wide, flaccid. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, oblong, 4–5 cm long, 1–1.5 cm wide. Primary panicle branches ascending. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, unequal, 0.2–0.5 mm long, 2.5 mm long at branch 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 lanceolate, dorsally compressed, acute, 1.2–1.3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface pilose, hairy at apex. Lower glume hairs 0.5–0.7 mm long. Lower glume apex acute. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface pilose, hairy at apex. Upper glume hairs 0.5–0.7 mm long. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1–1.2 mm long, 1 length of spikelet, membranous, 5 -veined. Fertile lemma lanceolate or oblong, dorsally compressed, 1–1.2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum carautae S.A. Renvoize. *Kew Bull.*, 32(2): 422 (1978).

Regarded by K as a synonym (*Apochloa lutzii*).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *P. Carauta* 1713, 23 Jun 1974, Brazil: Guanabara: Parque Nacional da Tijuca, Pedra da Gavea (K; IT: US-2757421).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Jorge Pedro Periera Carauta (1930-) Brazilian botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes elongated. Basal innovations flabellate. Culms erect, 50 cm long. Leaf-sheaths keeled, glabrous on surface. Ligule a ciliate membrane. Leaf-blades lanceolate, flat or conduplicate, 25–40 cm long, 5–7 mm wide, glaucous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 10–15 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, 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, barren. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Panicum carneovaginatum Renvoize. *Kew Bull.*, 34(3): 555 (1980).

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

TYPE from Zambia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zambia: Isoka, Mbesuma, Chambeshi River, 28 Jan 1958, *Vesey-FitzGerald 1405* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. caro, flesh; vagina, sheath; -atum, possessing. Leaf-sheath flesh-colored.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths papery, red (pink tinged). Culms 45–145 cm long. Leaf-sheaths keeled. Ligule a ciliate membrane. Leaf-blades parallel-sided, conduplicate, 20–55 cm long, 1–3 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 10–30 cm long. Primary panicle branches ascending, naked below. 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, acute, 2.2–2.8 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.33–0.5 length of spikelet, membranous, without keels, (1–)3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, dark brown or black, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa, South tropical Africa. Sudan. Tanzania, Uganda. Malawi, Mozambique, Zambia.

Panicum caudiglume Hack. *Oesterr. Bot. Zeitschr.* li. 428. (1901).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Indonesia, Java. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H.N. Ridley s.n.*, (W(fragm., US-80515); IT: SING).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. caudex, tail; gluma, husk. Lower glume ovate and apex tapering.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 30–80 cm long, 4 -noded. Ligule a ciliate membrane. Leaf-blades 7–14 cm long, 3–7 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, loose, 20–25 cm long. Primary panicle branches spreading, 1 -nate. Panicle branches capillary, scabrous. 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 lanceolate, dorsally compressed, 2.5 mm long, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.5 mm long.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume lateral veins ribbed. Lower glume surface scabrous, rough on veins. Lower glume apex acuminate, awned, 1 -awned, awn 0.5–1 mm long. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume lateral veins ribbed. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 1.5 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Java, Lesser Sunda Is, Philippines.

Panicum cayennense Lam. *Illustr. i.* 173. (1791).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from French Guiana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *D. Stoupy s.n.*, French Guiana: Cayenne (P-LA; IT: BAA (fragm. ex P), US-81397 (fragm. & photo ex P)). LT designated (as type) by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: 70 (1910).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (257, Fig. 210), S.A.Renouze, *The Grasses of Bahia*, 1984 (150, Fig. 53), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Cayenne, French Guiana.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 18–40 cm long, 1–2 mm diam. Culm-internodes distally glabrous or hispid, with tubercle-based hairs. Lateral branches ample, arising from lower culm or mid culm. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliate membrane, 0.8–1.2 mm long. Leaf-blades 9–13 cm long, 5–8 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences intermingled with terminal. Panicle open, ovate, 5–16 cm long, 4–8 cm wide. Primary panicle branches branching divaricately. Panicle branches scabrous, pubescent 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 obovate, dorsally compressed, cuspidate, 2.1–2.3 mm long, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.4 mm long.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.3–1.6 mm long, 0.6–0.7 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1.8–2 mm long, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1.8–2 mm long, 1 length of spikelet, membranous, 5 -veined, acute. Palea of lower sterile floret 0.75–0.8 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.4–1.5 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.7–0.9 mm long, purple.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Belize, Costa Rica, Guatemala, Honduras, Panama. Cuba, Dominican Republic, Haiti, Jamaica. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South.

TDWG4. Amazonas, Acre, Rondonia, Mato Grosso, Bahia, Maranhao, Piaui, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Panicum cayoense Swallen. *Contrib. U. S. Nat. Herb.* xxix. 418 (1950).

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: HT: *C.L. Lundell 6809*, Jul 1936-Aug 1936, Belize: Cayo: top of limestone hill at San Agustin, Mountain Pine Ridge (US-1722487; IT: LL, US-1647559).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From El Cayo District, British Honduras.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 105 cm long. Culm-internodes distally hirsute. Lateral branches sparse. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliate membrane, 0.5 mm long.

Leaf-blades lanceolate, 10–16 cm long, 15–21 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Panicle open, ovate, 21 cm long. Primary panicle branches ascending. Panicle branches stiff, scabrous. 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, 2.3–2.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, dorsally compressed, 2 mm long, indurate, without keel. Lemma margins involute, ciliate. Lemma apex acute. Palea involute, indurate. Palea surface villous.

Flower and Fruit. Caryopsis with adherent pericarp.

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

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

Panicum cervicatum Chase. *Journ. Wash. Acad. Sci.* ii. 164 (1942).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: A. Chase 10737, 4 Feb 1930, Brazil: Mato Grosso: Tres Lagoas (US-1500814; IT: K, RB, US-1816795).

Recent Synonyms: *Panicum vinaceum* Swallen, *Fieldiana*, Bo. 28(1): 27 (1951)

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (154, Fig. 55), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (191, Fig. 133), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (223, Fig. 61).

Derivation (Clifford & Bostock 2007): L. cervix, neck; -atum, pertaining to. Refers to the stiff-necked posture of the spikelets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–150 cm long. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, flat or involute, 12–40 cm long, 7–18 mm wide, coriaceous, stiff. Leaf-blade surface ribbed, glabrous or pilose. Leaf-blade margins cartilaginous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, effuse, 30–50 cm long. Primary panicle branches ascending or spreading. Panicle branches stiff. 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, tilted on the pedicel, dorsally compressed, 7–9 mm long, falling entire, readily shedding fertile florets. Rhachilla internodes elongated between glumes. Floret callus elongated, 1–1.5 mm long, winged, with lateral wings.

Glumes. Glumes dissimilar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, (3–)5(–7) -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 0.9 length of spikelet, membranous, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 4.5–6 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

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

TDWG4. Para, Amapa, Mato Grosso, Goias, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana.

Panicum chambeshii Renvoize. *Kew Bull.*, 34(3): 553 (1980).

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

TYPE from Zambia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Vasey-Fitzgerald 1428*, Zambia: Isoka (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): from Chambeshi River, Zambia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 45–90 cm long. Leaf-sheaths as wide as blade at the collar or narrower than blade at the collar. Ligule a ciliate membrane. Leaf-blades 7–20 cm long, 3–5 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–14 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse or acute, 3–4.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -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, 9 -veined, acute. Fertile lemma oblong, dorsally compressed, 3–4.5 mm long, indurate, purple, shiny, without keel, more than 3-veined. Lemma surface scaberulous, rough above (tip). Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa. Tanzania. Zambia.

Panicum chaseae Roseng., B.R. Arrill. & Izag. *Bol. Fac. Agron. Univ. Montevideo* 103: 9, f. 2. 1968.

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 Uruguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *B. Rosengurt 10804*, 3 Feb 1967, Uruguay: Rocha: Ruta 9, Fortaleza Santa Teresa, en costado del camino en suelo arenoso-arcilloso (MVFA; IT: BAA, K, P, SI, US-2946507).

Illustrations (Books): B.Rosengurt, *Gramineas Uruguayas I* (1970) (334, fig. 141 as *P. chasei*).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 40 cm long. Lateral branches lacking. Leaves mostly basal. Ligule a ciliate membrane. Leaf-blades 2–3 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–23 cm long, contracted about primary branches. Primary panicle branches 1–2 -nate, 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 elliptic, dorsally compressed, 2.7–3.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2–2.1 mm long, indurate, without keel, 7 -veined, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil South. Uruguay.

TDWG4. Catarina, Rio Grande do Sul. Corrientes, Entre Rios.

Panicum chillagoanum B.K.Simon. *Austrobaileya*, 3(4): 596 (1992).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *J. Clayton 454*, USA: Virginia (BM; ILT: US-80553 (fragm.& photo ex BM)). LT designated by Hitchcock, Contr. U.S. Natl. Herb. 12: 118 (1908).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): L. -anum, indicating location. From Chillago, Queensland, Australia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 15–60 cm long, 2–3 -noded. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode. Leaf-sheath oral hairs ciliate. Ligule a ciliate membrane, 1 mm long. Leaf-blades 2–12 cm long, 2–5 mm wide. Leaf-blade surface pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–25 cm long. Primary panicle branches spreading, 3–14 cm long, bearing 15–20 fertile spikelets on each lower branch. Panicle axis smooth. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 3–12 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 2.1–2.7 mm long, 0.8–1 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.9–1.2 mm long, 0.4–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, acuminate. Fertile lemma oblong, dorsally compressed, 1.5 mm long, indurate, light brown, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland. North.

Panicum chionachne Mez. *Engl. Jahrb.* lvii. 185 (1921).

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

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *A. Stolz 1270*, 15 May 1912, Tanzania: Rungwe Dist., Kyimbila (K, US-1720125 (C. Mez hb. I. 1110), US-80564 (fragm. ex M), WAG). IT?: *Stolz 1270A*, 15 May 1912 (US-1445597 (ex hb. Delessert)).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):40, t. 8).

Derivation (Clifford & Bostock 2007): Gk. chion, snow, achne, scale. Fertile lemma is white.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms decumbent, slender, 35–100 cm long. Ligule a ciliate membrane. Leaf-blades lanceolate, parallel-sided, 5–10(–20) cm long, 5–10 mm wide. Leaf-blade venation without cross veins. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 10–22 cm long. Primary panicle branches ascending or spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute or acuminate, 2–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.75–1 length of spikelet, membranous, without keels, 3 -veined. Lower glume lateral veins ribbed. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5(–7) -veined. Upper glume lateral veins ribbed. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, ribbed, acute or acuminate. Fertile lemma oblong, dorsally compressed, 1.5–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa. Rwanda, DRC. Sudan. Kenya, Tanzania, Uganda. Malawi, Zambia.

Panicum chloroleucum Griseb. *Goett. Abh.* xix. 262. (1874).

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: IT: *P.G. Lorentz 445*, 1872, Argentina: Catamarca: en terreno salado de la Laguna Blanca (CORD, US-80566 (fragm. ex B), US-1720080).

Illustrations (Books): E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (472, Fig. 169).

Illustrations (Journals): *Darwiniana* (22: 25, Fig.6i-k (1979)).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 40–70 cm long, 2–3 mm diam. Culm-internodes 3.4–10 cm long, distally glabrous or pubescent. Culm-nodes brown, pubescent. Leaf-sheaths 5–11.5 cm long, longer than adjacent culm internode, glabrous on surface or pubescent. Ligule a ciliate membrane, 1.5–2.5 mm long. Collar pubescent. Leaf-blades flat or involute, 15–30 cm long, 1–4 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 10–33 cm long, 4–14 cm wide. Primary panicle branches 1-nate. Panicle axis pubescent. Panicle branches pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 1–6 mm long, pubescent.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3.5–4.9 mm long, 1.2–1.7 mm wide, falling entire.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 2.5–4 mm long, 0.5–0.66 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume surface pubescent, hairy above. Lower glume apex acute. Upper glume ovate, 3.4–4 mm long, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume primary vein pubescent. Upper glume surface pubescent, hairy above. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 3.6–4 mm long, 1 length of spikelet, membranous, 5–7 -veined, pubescent, hairy above, pubescent on margins, fringed below, acuminate. Palea of lower sterile floret 3–3.8 mm long, pubescent, adorned on flanks. Fertile lemma elliptic, dorsally compressed, 2.5–3 mm long, 1.2–1.6 mm wide, indurate, pallid, shiny, without keel, 7 -veined, more than 3-veined. Lemma margins involute, ciliate, hairy at base. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.9–2.2 mm long. Caryopsis with adherent pericarp, oblong, 2.2–2.3 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

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

TDWG4. Catamarca, Jujuy, La Rioja, Salta, Tucuman.

Panicum cinctum Hack. *Oesterr. Bot. Zeitschr.* 429. (1901).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *J.M. Hildebrandt 3997*, Jan 1881, Madagascar (US-1649624, US-80519 (fragm.)).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (325, Fig 120).

Derivation (Clifford & Bostock 2007): pedicel with a ring of hairs immediately below the spikelet.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20 cm long, 2–3 -noded. Lateral branches lacking. Leaves mostly basal. Ligule a ciliate membrane. Leaf-blades 3–8 cm long, 3–4 mm wide, stiff. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 2–4 cm long. Primary panicle branches profusely divided. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate, hairy at tip.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, dorsally compressed, 1.5–2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex cuspidate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, coriaceous, pallid, without keel. Lemma margins involute. Lemma apex acuminate. Palea involute, coriaceous.

Distribution (TDWG). Continent. Africa.

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

Panicum claytonii Renvoize. *Kew Bull.* xxii. 484 (1968).

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

TYPE from Zambia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *N.K.B. Robson* 332, 24 Oct 1958, Malawi: Northern, Nyika Plateau, Lake Kaulwe (WAG).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of William Derek Clayton (1926-) English agrostologist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes short, knotty. Butt sheaths pubescent. Culms erect or geniculately ascending, (15-)40–75 cm long. Lateral branches lacking. Ligule a ciliate membrane. Leaf-blade base cordate or amplexicaul. Leaf-blades lanceolate, 4–11.5 cm long, 5–16 mm wide. Leaf-blade surface scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 3–10 cm long. Primary panicle branches simple, bearing spikelets almost to the base. Panicle branches pilose, with clavellate hairs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 3–15 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 2.5–5.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 7 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -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, 9 -veined, acute. Palea of lower sterile floret pilose. Fertile lemma oblong, dorsally compressed, 3.5–5.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa. DRC. Tanzania. Malawi, Zambia.

Panicum coloratum L. *Mant.* i. 30. (1767).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Egypt. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Egypt: Cairo:, *Forsskal s.n.* (HT: LINN-80.45).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (335, Fig 291 & 292 & var. *makarikariense*), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (459, Fig 391), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (589, Fig 119), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (315), 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) (473).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, L.Boulos, *Flora of Egypt* 4 (2005);, F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. color, color; -ata, possessing. Colored unusually, especially with reference to lemmas.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Cataphylls inconspicuous, or evident. Culms erect or decumbent, 15–100 cm long. Culm-nodes glabrous or pubescent (rarely). Leaf-sheaths glabrous on surface or pilose or hispid. Ligule a ciliate membrane. Leaf-blade base simple or broadly rounded or cordate. Leaf-blades (3-)12–30 cm long, (2-)5–10 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 4–30(–40) cm long. Primary panicle branches appressed or ascending or spreading. 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 or acute or acuminate, 2–3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.33 length of spikelet, membranous, without keels, 1(–3) -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -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, 7–9 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 36$ (1 ref TROPICOS).

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Northern Africa, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Middle Atlantic ocean.** Egypt. Nigeria. Rwanda. Chad, Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Northern Cape, Eastern Cape. St Helena. **Arabian Peninsula, China** (*). Oman. **Indian Subcontinent, Papuasias.** Solomon Is (*). **Australia.** Western Australia (*), Queensland (*), New South Wales (*), Victoria (*). **North-central Pacific.** Fiji (*), New Caledonia. Hawaii (*). **South-central USA, Mexico.** New Mexico, Texas. Northeast Mexico, Northwest Mexico. **Northern South America, Brazil.** Guyana.

Kimberley, South-West. Central, South East. Coast, Tablelands, Western Slopes, Western Plains. Coahuila. Sonora.

Panicum comorense Mez. *Engl. Jahrb.* lvii. 185 (1921).

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: ST: *C. Holst 459*, no date, Tanzania: Usambara Mts. (B; IST: US-80594 (fragm.)). Collection number published as 549. ST: *Boivin s.n.*, Comore Islands (B).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From the Comore Islands in the Indian Ocean.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or decumbent, slender, 30–100 cm long. Ligule a ciliate membrane. Leaf-blade base asymmetrical. Leaf-blades spreading, lanceolate, 6–15 cm long, 10–15 mm wide, membranous. Leaf-blade venation with distinct cross veins. Leaf-blade surface pilose, sparsely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, oblong, 12–30 cm long, contracted about primary branches. 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, obtuse, 1.8–2.2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.25–0.33 length of spikelet, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma surface asperulous, rough above. Lemma margins involute. Lemma apex obtuse, with a shallow excavation or with a green spot. Palea involute, indurate.

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

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, Nigeria. Ethiopia (inc. Eritrea), Sudan. Tanzania, Uganda. Malawi, Mozambique, Zambia. Swaziland. Comoros, Madagascar.

Panicum complanatum Guglieri, Longi-Wagner & Zuloaga. *Syst. Bot.* 31(3): 506-- 511, f. 1, 3–5 (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Minas Gerais: Brumadinho, Parque Estadual do Rola Moca, 6 Feb 2004, A. Guglieri, H.M.LongiWagner, P.L.virana & F.M.Ferreira 283 (holo, ICN; iso,SI).

Illustrations (Journals): *Systematic Botany* (31: 507, Fig.1 & 508, Fig.2 (2006)).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 35–60 cm long. Culm-internodes terete, thin-walled, distally pilose. Culm-nodes pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths retrorsely scabrous, hirsute. Ligule a ciliate membrane, 0.2–1 mm long. Collar pilose. Leaf-blades flat or involute, 14–24 cm long, 2–4 mm wide. Leaf-blade surface pubescent.

Inflorescence. Inflorescence a panicle. Peduncle 25 cm long, hirsute above. Panicle open, ovate, loose, 10–20 cm long, 5–12 cm wide. Primary panicle branches 4–5 in number, ascending. Panicle axis scaberulous, hirsute. Panicle branches pubescent in axils. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 3–8 mm long, ciliate, hairy all along but hairs longer above.

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, 4.7–5.5 mm long, 1–1.5 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 3–3.5 mm long, 0.5–0.6 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume ovate, 4.3–4.7 mm long, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume surface scabrous, rough at apex. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 9 -veined, smooth or scaberulous, rough at apex, acuminate. Palea of lower sterile floret hyaline, (1.3–)2.3–2.5 mm long. Fertile lemma elliptic, dorsally compressed, 3–5.1 mm long, 1–1.2 mm wide, indurate, pallid, without keel, more than 3-veined. Lemma surface smooth, with basal hair tufts near margin. Lemma margins involute. Palea involute, indurate. Palea surface papillose, pilose, hairy in a transverse fringe, hairy at base.

Flower and Fruit. Lodicules 2. Anthers 3, 1.9–2 mm long. Caryopsis ellipsoid, 2 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Panicum congestum Renvoize. *Kew Bull.*, 37(2): 329 (1982).

Accepted by: 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: R.M. Harley, S.A. Renvoize, C.M. Erskine, C.A. Brighton & R. Pinheiro 16869, 6 Mar 1974, Brazil: Bahia: 22 km NW of Lagoinha, (which is 5.5 km SW of Delfino), on side road to Minas do Mimoso, alt. ca. 980 m, 10°20'S, 41°20'W, cerrado over sandstone rocks, this plant growing on rock ledges, occasional, tufted perennial grass, spikelets barely emerging from leaf-sheaths (CEPEC; IT: K, MO-3663769, NY, RB, U, US-2955113).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (160, Fig. 58).

Derivation (Clifford & Bostock 2007): L. crowded together. Branches crowded in inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–50 cm long. Culm-internodes unequal, the lower longer, distally hirsute. Culm-nodes brown, pubescent. Lateral branches ample, arising from upper culm. Leaf-sheaths hirsute. Ligule a ciliate membrane, 1 mm long. Collar pubescent. Leaf-blades linear or lanceolate, 1.5–5 cm long, 2–4 mm wide. Leaf-blade surface hirsute, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, comprising 2–3(–9) fertile spikelets, embraced at base by subtending leaf. Peduncle 0.4 cm long. Panicle contracted, linear, 2 cm long, bearing few spikelets. Panicle axis pilose. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, villous.

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, 2.8–3.2 mm long, 1 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 2.2–2.6 mm long, 0.75 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume surface pilose. Lower glume apex acute. Upper glume elliptic, 2.5 mm long, 0.9 length of spikelet, membranous, without keels, 9 -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, elliptic, 1 length of spikelet, membranous, 9 -veined, pilose, acute. Palea of lower sterile floret 0.66 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.4 mm long, 0.8 mm wide, indurate, without keel, 5 -veined, more than 3-veined. Lemma surface papillose. Lemma margins involute. Lemma apex apiculate, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, light brown. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

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

Panicum congoense Franch. *Mem. Soc. Hist. Nat. Autun*, viii. 342 (1895).

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: ST: *Griffon du Bellay s.n.*, Gabon ST: *Dybowski 85*, Congo: C. dans toutes les prairies à N'Goré ST: *H. Lecomte s.n.*, Congo: Niouwana.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From the former French and Belgian Congo now Gabon and Zaire.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous or pubescent, persistent and investing base of culm, with compacted dead sheaths. Culms erect, 30–60 cm long. Ligule a ciliate membrane. Leaf-blades filiform, convolute, 10–20 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 10–15 cm long. Primary panicle branches 1–2 -nate. Panicle branches capillary, glabrous. 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, acuminate, 1.5–1.7 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 0.66 length of spikelet, membranous, without keels, 1–5 -veined. Lower glume primary vein scaberulous. Lower glume apex acuminate. Upper glume oblong, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume primary vein scaberulous. Upper glume apex acuminate.

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

Flower and Fruit. Anthers 3, 1 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, South tropical Africa. Ghana, Liberia, Senegal, Sierre Leone. Congo, Gabon, DRC.

Panicum cordatum Doell, non Buese(1854). *Mart. Fl. Bras* ii. III. 289. (1877).

More checking of status required (?= *Hymenachne donacifolia*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Junghuhn s.n.*, Oct 1847, Indonesia: Java (L-908.92–517).

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (301, Fig 115).

Derivation (Clifford & Bostock 2007): *L. cordus*, heart; -ata, possessing. Bases of leaf-blades cordate.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 70–120 cm long, 2–3 mm diam., woody. Culm-internodes terete, 5–10 cm long, smooth, distally glabrous. Lateral branches lacking or sparse. Leaves cauline. Leaf-sheaths mostly shorter than adjacent culm internode, outer margin glabrous or hairy. Ligule a ciliate membrane, 1–2 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 4–13 cm long, 10–25 mm wide, light green or dark green, discolorous with last colour beneath. Leaf-blade venation with distinct cross veins. Leaf-blade surface smooth or scaberulous, pubescent, hairy on both sides. Leaf-blade margins scabrous, glabrous or tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, effuse, 15–30 cm long, 8–17 cm wide. Primary panicle branches ascending or spreading, 1–2 -nate. Panicle axis with lower internodes 2–6 cm long, angular, scabrous. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 3–9 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, obtuse, 2.2 mm long, 0.8–1 mm wide, falling entire, readily shedding glumes.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66–0.9 length of spikelet, membranous, much thinner on margins, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume surface glabrous or pubescent. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, chartaceous, with membranous margins, without keels, 5 -veined. Upper glume surface glabrous or puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, chartaceous, much thinner on margins, 5 -veined, glabrous or puberulous, acute. Fertile lemma elliptic, dorsally compressed, 1.7 mm long, coriaceous, dark green or dark brown, shiny, without keel. Lemma margins involute. Palea involute, coriaceous.

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

Country /Province /State. Eastern Asia. Taiwan.

Panicum crystallinum Judz. ms.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

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

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

Panicum cristatellum Keng. *Sinensia*, xi. 412. (1940).

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

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Jiangsu: Jiangyin, marshy ground, 150 ft, June 1922, A. Allison 202 (HT: US-1024830).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. crista*, crest; -ata, possessing; -ellum, diminutive. Upper lemma shortly apiculate.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms prostrate, slender, 30–60 cm long, 1 mm diam., 3 -noded, rooting from lower nodes. Culm-internodes papillose, distally pubescent. Culm-nodes swollen, glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 0.5 mm long, obtuse. Leaf-blades lanceolate or oblong, 3–10 cm long, 5–10 mm wide. Leaf-blade surface puberulous, hairy on both sides. Leaf-blade margins smooth or scaberulous, ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–20 cm long. Primary panicle branches ascending or spreading, 5–10 cm long. Panicle branches angular, scaberulous, pubescent in axils. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, 1–4 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.75 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 2.5 mm long, coriaceous, pallid, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex apiculate, laterally pinched. Palea involute, coriaceous.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG), Continent. Temperate Asia.

Country /Province /State. China. China Southeast.

TDWG4. Jiangsu.

Panicum cupressifolium A.Camus. *Bull. Soc. Bot. France*, lxxii. 372. (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Perrier de la Bathie no. 10.893*, "Madagascar centr.: Massif de l'Andringitra ..." ST: *Perrier de la Bathie no. 14.548*, "Madagascar centr.: Massif de l'Andringitra ... et audessus ...".

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. folium*, leaf. Leaf-blades only 1–1.5 mm long thereby resembling *Cupressus* leaves.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms 40–150 cm long. Lateral branches suffrutescent. Leaves with sheath almost obsolete. Ligule absent. Leaf-blades appressed (imbricate), triangular (scale-like), 0.05–0.15 cm long, coriaceous, stiff. Leaf-blade apex acute.

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

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 1.8–2 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.8 mm long, 0.4 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 1.5 mm long, 0.8 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, membranous, 5 -veined, obtuse. Fertile lemma lanceolate, 1.8–2 mm long, coriaceous, shiny. Lemma margins involute. Lemma apex acute. Palea 1 length of lemma, coriaceous.

Distribution (TDWG), Continent. Africa.

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

Panicum curviflorum Hornem. *Hort. Bot. Hafn., Suppl.* :116 (1819).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960) (as *P. trypheron*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987) (as *P. trypheron*).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: NT: *Herb. Roxburgh*, India: cultivated in Copenhagen in 1818, from seed obtained from Wallich as *Panicum tenellum* Roxb. which in turn were collected from plants cultivated in the Calcutta Bot. Gardens (BM). NT designated by Veldkamp, *Blumea* 34: 79 (1989).

Recent Synonyms: *Panicum trypheron* Schult., *Mant.* 2: 244. (1824).

Illustrations (Books): C-C Hsu, *Taiwan Grasses* (1975) (as *P. trypheron* var. *suishaensis*), K.M.Matthew, Illustrations on the *Flora of Tamilnadu Carnatic* (1982) (Pl. 904 & 905 as *P. trypheron*), H.J.Noltie, *The Grasses of Bhutan* (2000) (691, Fig. 38), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 714).

Illustrations (Journals): *Reinwardtia* (9: 406, fig.21 (1980 as *P. deccanense*)).

Derivation (Clifford & Bostock 2007): *L. curvus*, bent; flos, flower. Spikelets curved.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 30–90 cm long. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths hispid, with tubercle-based hairs, outer margin hairy. Ligule a fringe of hairs. Leaf-blades linear or lanceolate, 7–30 cm long, 4–9 mm wide. Leaf-blade surface hispid, with tubercle-based hairs. Leaf-blade apex abruptly acute or acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, effuse, 10–25 cm long. Primary panicle branches drooping, 2–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–15 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, acuminate, 2.8–3.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 1.5–2 mm long, 0.66 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex cuspidate. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate or cuspidate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic or ovate, 1 length of spikelet, membranous, 7 -veined, acute. Palea of lower sterile floret 0.66 length of lemma. Fertile lemma oblong, dorsally compressed, 1.5–3 mm long, indurate, pallid or yellow, shiny, without keel, 7–9 -veined, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.5–1 mm long. Caryopsis with adherent pericarp, ovoid or orbicular, 1–1.25 mm long.

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

Country /Province /State. China, Eastern Asia. China South Central. Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Bangladesh, Eastern Himalaya, India, Pakistan, Sri Lanka. Laos, Myanmar, Thailand, Vietnam. Borneo, Java, Lesser Sunda Is, Malaya, Moluccas, Philippines, Sulawesi, Sumatra. New Guinea.

TDWG4. Yunnan. Darjeeling, Bhutan.

Panicum danguyi A. Camus. *Bull. Soc. Bot. France*, 72: 706 (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar centr.: massif de Manongarivo, vers 1200 m, rocailles humides, *Perrier de la Bathie 11072* (HT: P)

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms prostrate. Lateral branches ample. Leaf-sheaths striately veined, glabrous on surface. Ligule a ciliolate membrane. Leaf-blades lanceolate, 2.5–4 cm long, 1.5–3 mm wide. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 4.5–5 cm long, 1.5 cm wide. Primary panicle branches appressed. Panicle branches scaberulous, hirsute, bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–0.5 mm long, villous, with 2.5–3 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or oblong, dorsally compressed, 1.5–1.6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.3 mm long, 0.2 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 1.3–1.5 mm long, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface asperulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1.5–1.6 mm long, 1 length of spikelet, membranous, 5 -veined, scaberulous, acute. Fertile lemma oblong, dorsally compressed, 1.5–1.6 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum decaryanum A.Camus. *Bull. Soc. Bot. France*, xcix. 65 (1952).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar. Centre: quartzites, endroits humides des env. d'Ambatofinandrahana, alt. 1.600–1.800 m., *Decary 13.013*.

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (323, Fig 119).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Raymond Decary (1891–1973) French botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–70 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades filiform, involute, 5–15 cm long, 1–2 mm wide. Leaf-blade surface glabrous, hairless throughout or except near base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 5–10 cm long. Primary panicle branches ascending, 1 -nate. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, flexuous, 2–10 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or orbicular, dorsally compressed, subacute, 1.5–1.8 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.75–0.8 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, male or barren, 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, 1–1.2 mm long, indurate, without keel, more than 3-veined. Lemma surface papillose. Lemma margins convolute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum deciduum Swallen. *Mem. N. Y. Bot. Gard.* ix. 257 (1957).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *B. Maguire et al.* 30517, 1 Jan 1951, Venezuela: Amazonas: Río Orinoco: Cerro Yapacana (US-2040239).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (195, Fig. 142).

Derivation (Clifford & Bostock 2007): L. falling off. Leaves or spikelets deciduous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes absent. Culms 200–400 cm long. Culm-internodes distally glabrous. Lateral branches ample, arising from mid culm. Leaf-sheaths loose and deciduous, mostly shorter than adjacent culm internode, glabrous on surface. Ligule a ciliolate membrane, 1 mm long. Leaf-blades 7–9 cm long, 4–8 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, dense, 3–7 cm long, 1–3 cm wide. Primary panicle branches ascending, 2–4 cm long. Panicle branches stiff. 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, 3–3.2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 1 length of spikelet, membranous, without keels. Lower glume surface villous. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume surface villous. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, acute. Fertile lemma ovate, dorsally compressed, 1.5 mm long, indurate, pallid, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Panicum decolorans H. B. & K. *Nov. Gen. et Sp.* i. 100. (1815).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *F.W.H.A. von Humboldt & A.J.A. Bonpland s.n.*, Sep, Mexico: Queretaro (P-Bonpl.; IT: P, US-80663 (fragm. ex P & photo)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. decoloro*, deprive of its natural color. Glumes or lemmas pale-green to white.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms 30–60 cm long. Culm-internodes distally pilose. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliolate membrane, 1 mm long. Leaf-blades 8–15 cm long, 7–10 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 10–18 cm long. Primary panicle branches ascending. 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, acute, 4.5–6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2–2.5 mm long, 0.4–0.5 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, acute. Palea of lower sterile floret 0.25 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.3–3.5 mm long, 1.5 mm wide, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico, Southeast Mexico.

TDWG4. Mexico State, Puebla. Coahuila, Durango, Guanajuato, Hidalgo, Queretaro, San Luis Potosi, Zacatecas. Sinaloa. Jalisco, Michoacan, Oaxaca. Chiapas.

Panicum decompositum R. Br. *Prod.* 191. (1810).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Australia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: "(T.) *Littora Novae Hollandiae intra tropicum.*".

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (460, Fig 392 as var. *decompositum*), J.R.Wheeler et al, *Flora of the Kimberley Region* (1992) (1197, Fig 339), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (589, Fig 119), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (315), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (198, Fig. 31), 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. much divided*. Inflorescence much branched.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rootstock evident. Culms 30–80 cm long, compressible, 3–4 -noded. Culm-nodes glabrous or pubescent. Leaf-sheaths longer than adjacent culm internode, keeled, glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 2 mm long. Leaf-blades flat or conduplicate or involute, 25–50 cm long, 3–9.5 mm wide, glaucous. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or pilose, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acute or attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–30 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading, whorled at lower nodes. Panicle branches stiff, flat (at base), scabrous. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 1–4 mm long, tip cupuliform.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, compressed slightly, acuminate, 2.75–3.5 mm long, 1.25 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.25–0.33 length of spikelet, membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, acuminate. Palea of lower sterile floret 0.66–0.9 length of lemma. Fertile lemma elliptic or oblong, dorsally compressed, 2–2.2 mm long, indurate, yellow or dark brown, shiny, without keel, 7 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, ellipsoid or ovoid, 1.5 mm long. Embryo 0.5 length of caryopsis.

Distribution (TDWG). Continent. Europe (*), Temperate Asia, Australasia, Pacific.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **China, Eastern Asia.** Taiwan. **Australia.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales, Victoria. **Southwestern Pacific.** Fiji, New Caledonia, Tonga.

Kimberley, Eremaean, South-West. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

Panicum delicatulum Fig. & De Not. *Mem. Acc. Torin. Ser. II. xiv. 381.* (1854).

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

TYPE from Sudan.

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (208, Fig 86).

Derivation (Clifford & Bostock 2007): *L. delicatus*, dainty; -ula, diminutive. Small and dainty as of habit.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, slender, 10–30(–50) cm long. Ligule a ciliate membrane. Leaf-blades ovate, tapering towards sheath, 3–6 cm long, 5–12 mm wide. Leaf-blade surface pilose, sparsely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 3–8 cm long. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 2–2.5(–3) mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface asperulous, glabrous or pilose, with tubercle-based hairs. Upper glume apex acuminate, mucronate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, scaberulous, glabrous or pilose, with reflexed hairs, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. **West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa.** DRC. Ethiopia (inc. Eritrea), Sudan. Tanzania. Malawi, Zambia.

Panicum deustum Thunb. *Prod. Pl. Cap.* 19. (1794).

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 South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Thunberg s.n.*, South Africa (UPS).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (328, Fig. 287), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (203, Fig 84), S.A.Renvoize, *The Grasses of Bahia*, 1984 (152, Fig. 54), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (21, Fig. 9).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. burned up. Meaning obscure.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 70–200 cm long. Ligule a ciliate membrane. Leaf-blade base simple or broadly rounded. Leaf-blades linear or lanceolate, 15–48 cm long, 5–35(–40) mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle glabrous or pilose above (clavellately). Panicle open, oblong or ovate, 10–40 cm long, with spikelets clumped along branches. Primary panicle branches ascending or spreading. Panicle branches stiff, scaberulous, glabrous (rarely) or pilose, with clavellate hairs. 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, obtuse, 3.5–5(–5.5) mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, herbaceous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, herbaceous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, dorsally compressed, 3.5–5(–5.5) mm long, indurate, pallid, dull or shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 3–3.5 mm long.

$2n = 36$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, South America.

Country /Province /State. West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Rwanda, DRC. Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania, Uganda. Mozambique, Zambia, Zimbabwe. Botswana, Limpopo, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Western Cape, Eastern Cape. **Western Asia.** Afghanistan. **Brazil.** Brazil Northeast.

TDWG4.

Panicum dewinteri J. G. Anders. *Bothalia*, ix. 341 (1967).

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

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Bernard de Winter (1924-) South African botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 50–100 cm long, wiry, without nodal roots or rooting from lower nodes. Lateral branches suffrutescent. Ligule a ciliate membrane. Leaf-blades deciduous at the ligule, 2–5 cm long, 1–6 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–15 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acute, 3.5–4 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, acuminate. Palea of lower sterile floret 0.33 length of lemma. Fertile lemma elliptic, dorsally compressed, 3–3.5 mm long, indurate, light brown, shiny, without keel. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Limpopo.

Panicum dichotomiflorum Michx. *Fl. Bor. Am.* i. 48 (1803).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), T.G.Tutin et al, *Flora Europaea* 5 (1980), N.Tsvelev, *Grasses of the Soviet Union* (1983), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from USA. **Basionym or Replaced Name:** *Panicum aquaticum* Poir., *Encyc. Suppl.* 4: 281. (1816). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: USA: Allegheny Mountains, *Michaux s.n.* (HT: P-MICHX).

Recent Synonyms: *Panicum bartowense* Scribn. & Merr., *U. S. Dept. Agric. Circ. Agrost.* 35, 3 (1901). *P. chloroticum*.

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (554), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (471 as subspecies *dichotomiflorum* & *puritanorum* & *bartowense*), F.W.Gould, *The Grasses of Texas* (1975) (444, Fig. 236), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (253, Fig. 203), S.A.Renvoize, *Gramineas de Bolivia* (1998) (387, Fig. 82), S.A.Renvoize, *The Grasses of Bahia*, 1984 (150, Fig. 53), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (196, Fig. 145), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (703, Fig. 150), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (285, Fig.119), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (228, Fig. 63), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (325, Fig. 138), S-L Chen et al, *Flora of China*, Illustrations, *Poaceae* (2007) (Fig. 710), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:80(1980)).

Illustrations (Journals): *Ruizia* (13:316, Fig 38j-l (1993)).

Derivation (Clifford & Bostock 2007): *L. dichotoma*, with divisions in pairs; flos, flower. Inflorescence an open panicle.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, 100–200 cm long. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane, 2 mm long. Leaf-blades 12–50 cm long, 3–12(–20) mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or puberulous, hairy adaxially. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle, terminal and axillary, embraced at base by subtending leaf. Panicle open, ovate, 12–40 cm long. Primary panicle branches ascending. Panicle axis smooth or scabrous. Panicle branches stiff. Spikelets appressed, 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, 2.4–3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2–0.25 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex truncate or obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2.4–3 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 54$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe, Temperate Asia, Tropical Asia, Australasia, Pacific, North America, South America.

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

Country /Province /State. : Great Britain (*). : France. : Italy. **China, Eastern Asia.** China South Central, China Southeast. Japan, Taiwan. Japan Honshu (*). **Indian Subcontinent, Malesia.** India. Malaya. **New Zealand.** New Zealand North I. **North-central Pacific.** Hawaii (*). **Eastern Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Nova Scotia, Ontario, Quebec. Colorado, Idaho. Illinois, Iowa, Kansas, Minnesota, Nebraska, Oklahoma, Wisconsin. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, West Virginia. Arizona, California, Utah. New Mexico, Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia. Central Mexico, Northeast Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Panama. Bahamas, Bermuda, Cuba, Haiti. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Galapagos, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Chile Central, Paraguay, Uruguay.

TDWG4. Fujian, Guangdong, Guangxi. Yunnan. Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso, Goias, Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas

Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Buenos Aires, Chaco, Corrientes, Entre Rios, Formosa, La Pampa, Misiones, Santa Fe. Santiago, O'Higgins, Maule, Biobio. Distrito Federal, Mexico State. Chihuahua, Durango. Colima, Jalisco, Michoacan. Chiapas, Tabasco.

Panicum diffusum Sw. *Prod. Veg. Ind. Occ.* 23. (1788).

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

TYPE from Jamaica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O.P. Swartz s.n.*, no date, Jamaica (S; IT: G, M, US-76920 (fragm. ex S, ex M & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (465), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (257, Fig. 211).

Derivation (Clifford & Bostock 2007): L. widely spreading. Inflorescence an open panicle.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending or decumbent, slender, 20–100 cm long, wiry. Culm-nodes pubescent. Lateral branches ample. Leaf-sheaths glabrous on surface or hirsute, with tubercle-based hairs, outer margin hairy. Ligule a fringe of hairs, 1.5–3 mm long. Leaf-blades 5–20 cm long, 1–4.5 mm wide, mid-green. Leaf-blade surface glabrous or pilose, hairy on both sides.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences compact or enclosed. Panicle open, pyramidal, 5–25 cm long, with spikelets clustered towards branch tips. Primary panicle branches ascending or spreading. Panicle branches scabrous, glabrous 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 ovate, dorsally compressed, acute, 2.1–2.7 mm long, 1 mm wide, falling entire.

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

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

Country /Province /State. South-central USA. Texas. **Caribbean.** Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico.

Panicum dolichoadenotrichum A. Camus. *Bull. Soc. Bot. France*, 108: 161 (1961).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Diego Suarez: Humbert 49.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 100 cm long, 5–6 -noded. Culm-internodes glandular, distally pilose. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, pilose, with tubercle-based hairs, outer margin hairy. Leaf-sheath oral hairs bearded. Ligule an eciliate membrane, truncate. Leaf-blades linear or lanceolate, 25–30 cm long, 8–10 mm wide. Leaf-blade venation prominent, with 8–10 secondary veins. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, loose, 22–25 cm long, 13–15 cm wide. Primary panicle branches ascending, 10–12 cm long. Panicle axis with lower internodes 3–4 cm long, pilose, capitate hairs. Panicle branches pilose, with tubercle-based hairs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, glandular.

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, 3 mm long, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma, gaping. Lower glume ovate, clasping, 1.4–1.5 mm long, 0.5 length of spikelet, membranous, without keels, 3(–5) -veined. Lower glume apex acute. Upper glume ovate, 2 mm long, 0.66 length of spikelet, membranous, without keels, 709 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous. Fertile lemma oblong, dorsally compressed, 3 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex mucronate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum dorsense S.M. Phillips. *Kew Bull.*, 46(3): 535 (1991).

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

TYPE from Ethiopia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ethiopia: Gamo Gofa Prov.: Gughe Highlands, 4 km below Dorse on road to Arba Minch, 2150 m, abundant on loose scree, *Gilbert & Phillips 9262* (HT: K; IT: ETH, UPS).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Dorse, Gamo Gofar Province, Ethiopia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, mat forming, clumped loosely. Culms decumbent, slender, 10–35 cm long, rooting from lower nodes. Lateral branches ample. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades lanceolate, 0.8–2 cm long, 3–4 mm wide, firm. Leaf-blade surface pubescent. Leaf-blade margins ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 3–5 cm long, bearing many spikelets. Primary panicle branches ascending. Panicle branches capillary. 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, dorsally compressed, acute, 1.8–2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.5–0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -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, 5–7 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.8–2 mm long, indurate, pallid or grey, shiny, without keel, more than 3-veined. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa. Ethiopia (inc. Eritrea).

Panicum dregeanum Nees. *Fl. Afr. Austr.* 42. (1841).

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

TYPE from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Drège s.n.*, South Africa (?; IT: K, L).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):23, t. 5), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (337, Fig 126), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (200, Fig 83).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Johann Franz Drhge (1794–1881) German horticulturalist and plant collector in South Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent. Culms slender, (30–)55–110 cm long, wiry. Leaves mostly basal. Ligule a ciliate membrane. Leaf-blades filiform or linear, tapering towards sheath, flat or involute, (14–)18–35(–50) cm long, 1.5–3 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, (8–)12–18(–30) cm long. Primary panicle branches appressed or ascending. 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, 2–2.5(–3) mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 5(–7) -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 1.5–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Guinea, Nigeria, Senegal, Sierra Leone. Cameroon, Gabon, DRC. Chad, Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Botswana, Limpopo, Mpumalanga, Swaziland, Kwazulu-Natal, Eastern Cape. Madagascar.

Panicum ecklonii Nees. *Fl. Afr. Austr.* 43. (1841).

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

TYPE from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Drège s.n.*, South Africa (?; ILT: K). LT designated (as holotype) by Renvoize, Kew Bull. 22: 482 (1968).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (331, Fig. 289), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (18, Fig. 7).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): in honor of Christian Frederick Ecklon (1795–1868) German-born South African apothecary and plant collector.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with compacted dead sheaths or fibrous dead sheaths. Culms slender, 15–80 cm long. Leaves mostly basal. Leaf-sheaths wider than blade at the collar. Ligule a ciliolate membrane. Leaf-blades linear or lanceolate, (6–)10–20(–26) cm long, 3–8 mm wide. Leaf-blade surface pilose, sparsely hairy or moderately hairy or densely hairy, with capitate hairs or tubercle-based hairs. Leaf-blade apex acute or acuminate or attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 6–12(–18) cm long. Primary panicle branches ascending or spreading. Panicle branches capillary, glabrous or pilose, with clavellate hairs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 1.5–3.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 0.25–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex lobed, 3 -fid. Upper glume oblong, 0.66 length of spikelet, membranous, purple, without keels, 5 -veined. Upper glume apex lobed, 3–5 -fid.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 7 -veined, pilose, hairy above (tip), lobed, (3–)5 -fid. Fertile lemma oblong, dorsally compressed, coriaceous, pallid or red (pink), without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, coriaceous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Liberia, Nigeria. Cameroon, DRC. Tanzania. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Limpopo, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Eastern Cape.

Panicum effusum R. Br. *Prod.* 191. (1810).

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), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: R. Brown 6105, Australia (BM; IT: K).

Recent Synonyms: *Panicum viale* Chase, *J. Arnold Arbor.* 20: 310 (1939).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (461, Fig 393 as var. *effusum*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (589, Fig 119), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (316), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (195, Fig. 30 as var. *effusum*), 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. spread out. Inflorescence an open panicle.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths villous. Basal innovations extravaginal. Culms erect or geniculately ascending, 15–100 cm long, 2–3 -noded. Culm-internodes smooth or scaberulous. Culm-nodes glabrous or pubescent. Lateral branches lacking or sparse. Leaves mostly basal. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane, 1 mm long. Leaf-blades flat or involute, 5–25 cm long, 2–5.5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface ribbed, scabrous, pilose, sparsely hairy or moderately hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, deciduous as a whole, embraced at base by subtending leaf. Panicle open, oblong, effuse, 8–50 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading, 1–4 -nate, profusely divided, branching divaricately, 10–20 cm long. Panicle branches stiff, scabrous, glabrous, glabrous in axils or pubescent in axils. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 2–10 mm long, 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 lanceolate or ovate, dorsally compressed, acute or acuminate, 2.25–2.75 mm long, falling entire, deciduous with accessory branch structures, readily shedding fertile florets.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5(–0.66) length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 0.9 length of spikelet, membranous, 7 -veined, acuminate. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic or orbicular, dorsally compressed, 1.5–1.75 mm long, indurate, light brown, dull or shiny, without keel. Lemma surface smooth or papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Europe (*), Tropical Asia, Australasia.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Malesia, Papuaia.** New Guinea. **Australia.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales, A.C.T., Victoria, Lord Howe-Norfolk Is.

Kimberley, Ereman, South-West. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

***Panicum eickii* Mez. *Engl. Jahrb.* lviii. 185 (1921).**

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

TYPE from Tanzania. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *E. Eick 113*, no date, Kenya / Tanzania (US-80638 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Emil Eick (fl. 1898–99) who collected in Usumbara, Tanzania.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect, slender, 5–30 cm long. Leaf-sheaths striately veined, outer margin glabrous or hairy. Ligule a ciliate membrane. Leaf-blades appressed, tapering towards sheath or parallel-sided, 1–2(–7) cm long, 1–2(–4) mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, 1–2(–4) cm long. Panicle branches glabrous. 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, 2–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume orbicular, 0.75–1 length of spikelet, membranous, without keels, (3–)5(–7) -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa. Rwanda, DRC. Kenya, Tanzania, Uganda. Malawi, Zimbabwe.

Panicum elegantissimum Hook. f. *Fl. Brit. Ind.* vii. 52. (1896).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from Malaysia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Malay Peninsula: Perak, *Ridley 3116* (HT: K; IT: CAL, SING).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. elegans*, elegant; -issima, most. Very attractive in some respect, usually the inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–120 cm long. Leaf-sheaths 6–14 cm long, pilose. Ligule a fringe of hairs, 2.5 mm long. Leaf-blades 20–45 cm long, 3–6 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pilose, hairy on both sides.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 30–45 cm long, 15 cm wide. Primary panicle branches spreading. Panicle branches with prominent pulvini. 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, 3.2 mm long, falling entire.

Glumes. Glumes lateral (to upper lemma), reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, clasping, 0.33–0.45 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute, mucronate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.6 mm long, 0.8 length of spikelet, membranous, 9 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.2 mm long, indurate, pallid, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp, pallid (white).

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

Country /Province /State. China, Eastern Asia. China Southeast, Tibet. Taiwan. Indo-China, Malesia. Laos, Myanmar, Thailand, Vietnam. Borneo, Malaya, Philippines.

TDWG4. Guangdong, Guangxi. West Bengal.

Panicum elephantipes Nees ex Trin. *Gram. Pan.* :206 (1826).

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.H. von Langsdorff s.n.*, 1829, Brazil: Guapore (LE-TRIN-0692.01: B, BAA-1825 (fragm. ex B), US-974407 (fragm. ex LE)).

Recent Synonyms: *Panicum sucosum* Hitchc. & Chase, *Contr. U.S. Natl. Herb.* 17(6): 475, f. 30 (1915).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (255, Fig. 207), S.A.Renouvoise, *Gramineas de Bolivia* (1998) (387, Fig. 82), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (196, Fig. 144), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (623, Fig. 135 & 641, Fig. 137), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (283, Fig.108), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt*

2 *Gramineas* (1970) (547, Fig. 144), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (232, Fig. 64), B.Rosengurt, *Gramineas Uruguayas I* (1970) (325, Fig. 138).

Illustrations (Journals): *Ruizia* (13:316, Fig 38m-n (1993)).

Derivation (Clifford & Bostock 2007): *L. elephantus*, elephant; pes, foot. Culms thick and fleshy with black nodes reminiscent of an elephant's foot.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms 80–160 cm long, 10 mm diam., rooting from lower nodes. Culm-nodes constricted, purple, glabrous. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 2–3 mm long. Leaf-blade base broadly rounded. Leaf-blades 30–54 cm long, 11–20 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, dense, 15–30 cm long. Primary panicle branches ascending. Panicle branches scabrous. Spikelets appressed, in pairs. 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, acuminate, 3.8–4.2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1–1.2 mm long, 0.25 length of spikelet, hyaline, without keels, 3 -veined. Lower glume lateral veins obscure. Lower glume apex acute. Upper glume ovate, 3.8–4.7 mm long, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 3.8–4.7 mm long, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma ovate, dorsally compressed, 3.5 mm long, coriaceous, shiny, without keel. Lemma margins involute. Lemma apex acuminate. Palea involute, coriaceous.

Flower and Fruit. Anthers 3, 1.6–1.8 mm long, orange.

$2n = 30$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico. Guyana, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Para, Amapa, Amazonas, Acre, Rondonia, Catarina, Rio Grande do Sul. Buenos Aires, Chaco, Corrientes, Distrito Federal, Entre Rios, Formosa, Santa Fe. Distrito Federal, Mexico State. Guanajuato, Hidalgo, San Luis Potosi, Zacatecas. Sinaloa. Jalisco, Michoacan. Tabasco.

Panicum ephemeroide F.O. Zuloaga & O. Morrone. *Ann. Missouri Bot. Gard.*, 83(2): 239 (1996).

Accepted by: 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 ephemerum* Zuloaga, Morrone & Valls, *Iheringia, Bot.* 42: 4, f. 1–8, 18–20, 24–25 (1992)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Brasil: Goias: Jatai (51 km a oeste do Rio Claro e 9 km a este do acesso a Perolandia ao longo da rodovia BR-364, 860 m), 3 Apr 1986, Valls & Wemeck 9867 (HT: CEN; IT: SI, US).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 240, Fig.19 (1996)).

Derivation (Clifford & Bostock 2007): *L. -oides*, resembling. Similar to *Panicum ephemerum*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 60–70 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Leaf-sheaths striately veined and reticulately veined, glabrous on surface. Ligule a ciliate membrane, 2–2.5 mm long. Leaf-blades involute, 20–23 cm long, 2 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences similar to terminal. Peduncle 16–25 cm long, glabrous. Panicle open, elliptic, effuse, 30 cm long, contracted about secondary branches. Primary panicle branches ascending. Panicle axis angular, smooth or scaberulous. Panicle branches scabrous. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, clavate, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret

male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3.5–3.6 mm long, 1–3 mm wide, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 2.8 mm long, 0.75 length of spikelet, membranous, without keels, 3(–5) -veined. Lower glume primary vein scaberulous. Lower glume apex setaceously acuminate. Upper glume ovate, 3.5–3.6 mm long, 1 length of spikelet, membranous, without keels, 5(–7) -veined. Upper glume primary vein scabrous. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 3.5–3.6 mm long, 1 length of spikelet, membranous, 5 -veined, acuminate. Palea of lower sterile floret 2 mm long, 0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.1 mm long, 1.1 mm wide, indurate, dark brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 2.4 mm long, pallid. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

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

Panicum ephemerum S.A. Renvoize. *Kew Bull.*, 34(3): 551 (1979).

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: Zambia: Mwinilunga, 0.5 mi S of Matonchi Farm, in 6 ft of water on shallow soil over laterite, 2 Jan 1938, *Milne-Redhead 3926* (HT: K).

Illustrations (Journals): *Iheringia* (42: 9, Fig.1–8 (1992)).

Derivation (Clifford & Bostock 2007): Gk *ephemeros*, short lived. Completing life-cycle in a few weeks.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, slender, 25–35 cm long. Lateral branches lacking. Ligule a ciliate membrane. Leaf-blades filiform, involute, 9–16 cm long, 1–2 mm wide. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle, comprising 2–12 fertile spikelets. Panicle open, oblong, 1.5–8 cm long, bearing few spikelets. Primary panicle branches appressed or ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 3–3.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2.5–3 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Panicum exiguum Mez. *Engl. Jahrb.* 56 Beibl. 125, 3 (1921).

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: *C.W.H. Mosén 4571*, Mar 1876, Brazil: Minas Gerais: Serra de Caldas (B; IT: BAA-3885 (fragm. ex B), US-80623 (fragm. ex B)).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (234, Fig. 65).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 241, Fig.20 (1996)).

Derivation (Clifford & Bostock 2007): L. wanting in size and number. Spikelets or inflorescence branches few.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms decumbent, 10–30 cm long. Culm-internodes 1.5–7 cm long, distally glabrous or hirsute. Culm-nodes pallid or brown, pubescent. Lateral branches ample.

Leaf-sheaths 1–4 cm long, mostly shorter than adjacent culm internode, hirsute, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.5–1.5 mm long. Collar pubescent. Leaf-blades lanceolate, 2–6 cm long, 2–4 mm wide. Leaf-blade surface pilose, with simple hairs or tubercle-based hairs. Leaf-blade margins cartilaginous, scabrous, ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle hirsute above. Panicle open, pyramidal, effuse, 2.5–8 cm long, 2–6 cm wide. Panicle axis glabrous or pilose. Panicle branches glabrous or pilose, bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–10 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 2.6–3 mm long, 0.8–1 mm wide, falling entire, readily shedding fertile florets or readily shedding glumes (upper glume).

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.7–2.2 mm long, 0.75–0.8 length of spikelet, membranous, without keels, 5 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume primary vein scabrous. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Palea of lower sterile floret 1.2–1.7 mm long. Fertile lemma elliptic, dorsally compressed, 1.4–2 mm long, indurate, black, without keel, 5–7 -veined, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, 1.1–1.4 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. **Western South America, Brazil, Southern South America.** Bolivia, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast. Paraguay.

Goiás, Maranhão, Piauí, Minas Gerais, Rio de Janeiro, Espírito Santo.

Panicum fauriei Hitchcock. *Mem. Bishop Mus., Honolulu*, 8: 182 (1922).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from USA, Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Faurie 1318, Jun 1909, USA: Hawaii: [Molokai], Halawa (US-950341; IT: BM, US-950367).

Illustrations (Books): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1564, Pl. 232).

Derivation (Clifford & Bostock 2007): in honor of Urbain Jean Faurie (1847–1914) French cleric and amateur botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms 2–30(–46) cm long. Culm-internodes distally pubescent. Culm-nodes pubescent. Lateral branches sparse. Leaves cauline. Leaf-sheaths puberulous. Leaf-sheath oral hairs ciliate, 1–2.5 mm long. Ligule a ciliate membrane, 0.4–1.6 mm long. Leaf-blades flat or involute, 1.5–12 cm long, 1–4 mm wide. Leaf-blade surface pilose, hairy adaxially (puberulous below).

Inflorescence. Inflorescence a panicle. Panicle open, linear, 1–11 cm long. Primary panicle branches appressed. Panicle axis with scattered hairs or puberulous. Panicle branches puberulous or pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute or acuminate, 1.5–4.2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume surface glabrous or pubescent, without hair tufts or with an apical beard. Lower glume hairs 0.6–3.5 mm long. Lower glume apex acute or acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5–9 -veined. Upper glume surface glabrous or pubescent, without hair tufts or with an apical beard. Upper glume hairs 0.6–3.5 mm long. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, glabrous or pubescent, hairy above, acute. Palea of lower sterile floret 0.15–0.2 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.2–1.8 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.8–1.1 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum fischeri Bor. *Kew Bull.* 1956, 257 (1956).

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: *J.S. Gamble 21388*, Oct. 1889, Ind. Or.: Madras State, Nilgiris, Kullar, 750 m (K; IT: US-80617 (fragm.)).

Illustrations (Books): K.M.Matthew, *Flora Palni Hills* (1996) (851, Pl 851).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms 50–100 cm long. Ligule a fringe of hairs. Leaf-blades 15–30 cm long, 4–8 mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–30 cm long, 10–25 cm wide. Primary panicle branches whorled at most nodes, 8–15 cm long. Panicle branches scaberulous, glabrous in axils, with insignificant pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2.5–3 mm long, 0.5–0.66 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma elliptic, dorsally compressed, 3.5 mm long, coriaceous, yellow, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, coriaceous. Rhachilla extension 3.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Tamilnadu.

Panicum flacciflorum Stapf. *Prain, Fl. Trop. Afr.* 9: 654 (1920).

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

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.A. Grant s.n.*, no date, Tanzania (K(fragm., US-1445207)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. flaccidus*, unable to support its own weight; flos, flower. Panicle long exserted, branches pendulous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms 10–60(–90) cm long. Ligule a ciliolate membrane. Leaf-blade base cordate. Leaf-blades lanceolate, 3.5–10.5 cm long, 4–11 mm wide. Leaf-blade surface pilose, with simple hairs or clavellate hairs. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 3–9(–18) cm long. Panicle branches capillary, pilose, with clavellate hairs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

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 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 9 -veined. Lower glume lateral veins with cross-veins. Lower glume apex truncate or obtuse. Upper glume ovate, 1 length of spikelet, membranous, yellow, without keels, 9 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 9 -veined, acute. Palea of lower sterile floret pilose. Fertile lemma oblong, dorsally compressed, 3.5 mm long, chartaceous, pallid, without keel, 9 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, chartaceous.

Flower and Fruit. Anthers 3, 1 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa. Burundi, DRC. Tanzania, Uganda. Zambia.

Panicum flacourtii A. Camus. *Bull. Soc. Bot. France*, 72: 449 (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Mt Taratanana: Perrier 16163.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, slender, 25–35 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths striately veined, outer margin hairy. Ligule a ciliolate membrane. Leaf-blades lanceolate, 1.4–2 cm long, 3–5 mm wide. Leaf-blade surface pilose, hairy abaxially. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 5–7 cm long. Primary panicle branches spreading. Panicle branches capillary, 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 oblong, dorsally compressed, 1.5 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1–0.2 length of spikelet, membranous, without keels. Upper glume ovate, 1.4 mm long, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate or ovate, 1.5 mm long, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma lanceolate or oblong, dorsally compressed, 1.5 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum flexile (Gatt.) Scribn. *Bull. Torrey Bot. Club*, xx. 475 (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 USA. **Basionym or Replaced Name:** *Panicum capillare* var. *flexile* Gatt., *Tennessee Fl.* 94. (1887)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *A. Gattinger s.n.*, Sep 1889, USA: Tennessee: Knox Co.: near Nashville (TENN; ILT: US-742113). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: 55 (1910). ST: *A. Gattinger s.n.*, Sep 1888, USA: Tennessee: Davidson Co. (TENN; IST: US-80552).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (461).

Derivation (Clifford & Bostock 2007): L. *flecto*, bend; -ile, property. Culm geniculate at base and slender.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 12–75 cm long. Culm-internodes solid, distally glabrous to hispid. Culm-nodes glabrous or pubescent or bearded. Leaf-sheaths glabrous on surface to hispid. Ligule a fringe of hairs, 0.5–1.5 mm long. Leaf-blades 6–25 cm long, 2–7 mm wide. Leaf-blade surface glabrous to hispid.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 7–20 cm long, 0.5–0.66 of culm length, bearing few spikelets. Primary panicle branches ascending or spreading. Panicle branches glabrous in axils or pubescent 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 elliptic, dorsally compressed, acuminate, 3–3.4 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.4–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, acuminate. Fertile lemma elliptic, dorsally compressed, 2.2–2.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Eastern Canada, North-central USA, Northeast USA, South-central USA, Southeastern USA. Ontario, Quebec. Kansas, Missouri. Michigan, Pennsylvania. Alabama, Arkansas, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Virginia.

Panicum fluviicola Steud. *Syn. Pl. Gram.* 89. (1854).

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

TYPE from Gabon. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Jardin* 1875, Gabon (P; IT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. fluvius*, river; -cola, dweller. Growing along river banks.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous. Culms erect, (30–)60–230 cm long, (2–)3.5–7 mm diam. Ligule a ciliolate membrane. Leaf-blades (13–)25–50 cm long, 3–12 mm wide. Leaf-blade apex attenuate, hardened.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 10–45 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2–2.5(–3) mm long, falling entire.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma, recurved at apex. Lower glume ovate, 0.5–0.7 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate, mucous or mucronate. Upper glume ovate, membranous, without keels, 5 -veined. Upper glume apex acute to acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1.2–1.3 length of fertile lemma, 1 length of spikelet, membranous, 3 -veined, acute to acuminate. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Burkina, Ghana, Guinea-Bissau, Guinea, Ivory Coast, Mali, Mauritania, Nigeria, Senegal, Sierre Leone, Togo, Niger. Gabon, DRC. Chad, Sudan. Tanzania. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Kwazulu-Natal.

Panicum fontanale Swallen. *Phytologia*, xiv. 80 (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 Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.A. Steyermark* 76005, 3 Jul 1953, Venezuela: Bolívar: Chimantá Massif, Steyermark Falls (Steyermark-Merú) on upper reaches of Río Tirica (left-hand fork), separating eastern part of Apácará-tepui from western part of Chimantá-tepuí (Totrono-tepuí), on top of waterfall, alt. 1700–1750 m (US-2378641; IT: MO-2011350, MO-2012039).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. fontanus*, spring; -alis, pertaining to. From Steyermark Falls, on Rmo Tirica, Venezuela.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 45–50 cm long. Culm-internodes distally glabrous. Leaf-sheaths as wide as blade at the collar, glabrous on surface. Ligule absent. Leaf-blades 15–30 cm long, 2–3.5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 9 cm long. Primary panicle branches spreading or reflexed. 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, dorsally compressed, 3.2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, membranous, without keels. Lower glume primary vein smooth or scaberulous. Lower glume apex

acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Panicum funaense Vanderyst ex Robyns, nom superfl. *Mem. Inst. Roy. Bot. Belge* 1,6:19,32 (1932).

Regarded by K as a synonym (*P. spongiosum*).

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: Vanderyst no. 2,496, octobre 1913, "region agricole du Bas-Kasai: Wombali (dans les Marais),..." ST: Vanderyst no. 6436, "bords de la Funa ...".

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):18, t. 4).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From the banks of the Funa, probably a river, in Zambia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms 40–200 cm long, spongy. Ligule a fringe of hairs. Leaf-blades 15–35 cm long, 2–3 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 15–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, obtuse. Fertile lemma oblong, dorsally compressed, 2.5–3 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa, Southern Africa. DRC. Zambia. Botswana.

Panicum furvum Swallen. *Contrib. U. S. Nat. Herb.* xxix. 416 (1950).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: J.A. Steyermark 51627, 30 Aug 1942, Guatemala: Huehuetenango: between Nenton and Las Palmas: via Yalisjao, Rincón Chiquite, Chiaquial (US-1935086; IT: F, US-1935080).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *dusky*, almost black. Lemmas darkish purple-brown.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 10–21 cm long. Culm-internodes distally glabrous or pilose. Leaves mostly basal. Leaf-sheaths without keel, glabrous on surface. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades 2–6.5 cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 3.5–6 cm long. Primary panicle branches ascending, 3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 1.5–1.6 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, clasping, 1.3–1.5 mm long, 0.8–0.9 length of spikelet, membranous, without keels, 5 -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, barren. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.6 mm long, indurate, dark brown, 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. Mesoamerica. Guatemala.

Panicum gardneri Thw. *Enum. Pl. Zeyl.* 359. (1864).

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 Sri Lanka. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *G.H.K. Thwaites 894*, no date, Sri Lanka: Central (US-1126003 (fragm.)).

Illustrations (Books): K.M.Mathew, *Flora Palni Hills* (1996) (852, Pl 852).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 150–200 cm long (long), rooting from lower nodes. Culm-internodes distally glabrous or pubescent. Culm-nodes glabrous. Leaf-sheaths keeled, glabrous on surface or hirsute, with tubercle-based hairs, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliate membrane, 0.2–0.4 mm long. Collar glabrous. Leaf-blade base broadly rounded or cordate. Leaf-blades lanceolate, 2.5–15 cm long, 5–22 mm wide. Leaf-blade margins scaberulous, glabrous or ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–18 cm long. Primary panicle branches ascending or spreading. Panicle branches pubescent (hairs 1.5–2.5mm), glabrous 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 elliptic, dorsally compressed, 4–5 mm long, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation stout, 0.5 mm long.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 3.1–3.8 mm long, 0.8 length of spikelet, membranous, much thinner on margins, without keels, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, with hyaline margins, without keels, 5–9 -veined. Upper glume surface glabrous or pubescent, hairy above. Upper glume apex acute.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.9–3.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2–2.5 mm long. Stigmas purple. Caryopsis with adherent pericarp, ellipsoid, 2.2 mm long.

N = 50 (1 ref TROPICOS).

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India, Sri Lanka.

TDWG4. Kerala. Tamilnadu.

Panicum genuflexum Stapf. *Prain, Fl. Trop. Afr.* ix. 689 (1920).

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

TYPE from Mozambique. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *Hildebrandt 1087*, "Mozambique Distr. Zanzibar: Kokotoni, on dry soil, ..." (K).

ST: *Hildebrandt 1186*, "Mozambique Distr. Zanzibar: Kokotoni, on dry soil,..." (K; IST: US-1649640 (C. Mez hb. I. 1373)). US sampled by W.V. Brown 1973–1975 has K, P.S. leaf anatomy.

ST: *Hildebrandt 1187*, "Mozambique Distr. Zanzibar: Kokotoni, on dry soil, ..." (K).

ST: *Holst. 3120*, "German East Africa: Usambara; Muoa, ..." (IST: US-1649638 (C. Mez hb. I. 1371), US-1445785 (dup. ex hb. Delessert)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. genus, knee; flexum, bend. Culms repeatedly geniculate.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous. Culms slender, 30–75 cm long, 1–2 mm diam., wiry. Ligule a ciliate membrane. Leaf-blades tapering towards sheath, 15–30 cm long, 4–6 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 15–25(–30) cm long. Panicle branches flexuous. 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, 2–2.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.66–0.75 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acuminate.

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

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. DRC. Kenya, Tanzania. Mozambique. Kwazulu-Natal.

Panicum ghiesbreghtii Fourn. *Mex. Pl. Enum., Gram.* 29 (1886).

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: ST: *Dr. Gouin 21*, Oct, Mexico: Veracruz (US-76924 (fragm. ex P)). LT: *Ghiesbreght s.n.*, Mexico: absque loco (P; ILT: US-76924 (fragm. ex P & photo)). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: 76 (1910). ST: *Virlet 1306*, Mexico: San Luis Potosí (P; IST: US-76924 (fragm. ex P)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (465), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (258, Fig. 212), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (703, Fig. 150), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (307, Fig. 124).

Derivation (Clifford & Bostock 2007): in honor of August Ghiesbreghtii (1810–93) Belgian botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending or decumbent, 35–110 cm long, 1–2.5 mm diam. Culm-internodes distally pilose, with tubercle-based hairs. Culm-nodes bearded. Lateral branches ample, arising from lower culm or mid culm. Leaf-sheaths hirsute, with tubercle-based hairs, outer margin glabrous or hairy. Ligule a ciliate membrane, 1–2 mm long. Leaf-blades 11–30 cm long, 4–8 mm wide, mid-green. Leaf-blade midrib conspicuous. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, terminal and axillary. Peduncle pilose above. Panicle open, ovate or pyramidal, 20–35 cm long. Primary panicle branches ascending. Panicle branches scabrous. Spikelets ascending, 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, acuminate, 3.2–3.7 mm long, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.5 mm long.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.8–2.3 mm long, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 2–3.1 mm long, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.8–3.5 mm long, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma ovate, dorsally compressed, 2.2–2.4 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

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

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

Country /Province /State. South-central USA, Mexico. Texas. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama. Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Puerto Rico. Venezuela. Colombia, Ecuador. Brazil South. Argentina Northeast.

TDWG4. Catarina, Rio Grande do Sul. Entre Rios. Mexico State, Morelos, Puebla. San Luis Potosi, Tamaulipas. Veracruz. Sinaloa. Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Panicum gilvum Launert. *Mitt. Bot. Staatssamml. Munchen*, viii. 153 (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).

TYPE from Namibia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *M.K. Dinter 2544*, 20 Apr 1912, Namibia: Okahandja, Okahandja (L). IT: *R. Seydel 2210*, 27 Mar 1960, Namibia: Damaraland, Okahandja, 1400 m (L).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (589, Fig 119), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (316), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (198, Fig. 31), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. dull-yellow. Panicle dull-yellow.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 20–70 cm long. Ligule a ciliate membrane. Leaf-blades 7–15 cm long, 3–6 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, oblong, 4–10 cm long. Primary panicle branches appressed. 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, acute, 2.5–4 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.2–0.25 length of spikelet, membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–3.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Europe (*), Africa, Australasia (*).

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Southern Africa.** Namibia, Botswana, Limpopo, Northern Cape. **Australia.** Queensland (*), New South Wales (*), Victoria (*).

TDWG4. South East. Coast, Tablelands, Western Slopes, Western Plains.

Panicum glabripes Doell. *Mart. Fl. Bras.* ii. II. 216. (1877).

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 Uruguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F. Sellow 130*, no date, Uruguay: Montevideo (B; BAA-1846 (fragm. ex B), US-80675 (fragm. ex B & photo)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (675, Fig. 143), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (294, Fig. 115 as ssp. *subjunceum*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (336, Fig. 142 as *P. subjunceum*).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, robust, 70–130 cm long, 2–2.5 mm diam. Leaves mostly basal. Leaf-sheaths 11–25 cm long. Ligule a ciliate membrane, 1–1.3 mm long. Leaf-blades involute, 25–45 cm long, 4–5 mm wide. Leaf-blade surface pilose, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–26 cm long. Primary panicle branches profusely divided. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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 ovate, dorsally compressed, 2–3.5 mm long, 1.5 mm wide, 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, 1–1.5 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, Southern South America. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay.

TDWG4. Sao Paulo Parana, Catarina, Rio Grande do Sul. Corrientes, Entre Rios, Santa Fe.

***Panicum glanduliferum* K. Schum. *Abh. Naturw. Ver. Brem.* ix. 401. (1889).**

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar: Im Sumpfen ohne genauere Standortsangabe, 8 Nov 1877, *Rutenberg s.n.* (HT: not designated) IGS cites Distribution as "Germany".

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (325, Fig 120).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Glands capitate. Culms decumbent or rambling, weak, 100–200 cm long, rooting from lower nodes. Culm-internodes glandular, distally pilose, with capitate hairs. Culm-nodes pubescent. Leaf-sheaths glandular, pilose, with tubercle-based hairs or capitate hairs. Ligule a ciliolate membrane. Leaf-blades spreading or reflexed, conduplicate or involute, 1–10 cm long, 1–7 mm wide, eglandular or glandular. Leaf-blade surface glabrous or pilose, sparsely hairy, with capitate hairs.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–10 cm long, 2–6 cm wide, contracted about secondary branches. Primary panicle branches 4–5 cm long. Panicle branches glandular, pilose, with simple hairs or capitate hairs. Spikelets solitary or in pairs. Fertile spikelets sessile or sessile and pedicelled. Pedicels present, 2–4 mm long.

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

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 0.33–0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, mucous or mucronate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–9 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2–2.3 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins convolute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

***Panicum glandulopaniculatum* S.A. Renvoize. *Kew Bull.*, 44(3): 544 (1989).**

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: Malawi: Nkhata Bay Distr.: Bandawe, 3 Jul 1952, *Jackson 910* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. glandulosa*, with abundant small glands; paniculus, panicle; -atum, possessing. Panicle branches glanduliferous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or decumbent, 30–100 cm long, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blades lanceolate or ovate, 2.5–8.5 cm long, 10–20 mm wide. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 6–9(–14) cm long. Panicle branches stiff, glandular. 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, gibbous, 1.5–2 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 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, acute. Fertile lemma oblong, dorsally compressed, 1–1.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface scaberulous. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate. Palea surface scaberulous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Malawi, Mozambique, Zambia. Kwazulu-Natal.

Panicum gouinii Fourn. *Mex. Pl. Enum., Gram.* 28 (1886).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *Gouin* 4, Jul 1867, Mexico: Veracruz (P; IT: BAA (fragm.), MO-1639967 (probable), US-80682 (fragm. ex P & photo)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (262, Fig. 216), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (304, Fig. 122), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (558, Fig. 147).

Derivation (Clifford & Bostock 2007): in honor of Gouin (fl. 1864–67) who collected in Mexico.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly. Culms erect, 10–50 cm long. Culm-internodes 2.1–5.5 cm long, distally glabrous. Culm-nodes glabrous or pubescent. Leaf-sheaths 2.7–5.5 cm long, outer margin glabrous or hairy. Ligule a ciliolate membrane, 0.4–0.8 mm long. Collar dark, glabrous. Leaf-blades 4.5–13 cm long, 2–4 mm wide. Leaf-blade midrib evident, keeled beneath. Leaf-blade surface glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 5.4–10 cm long, 1–6 cm wide, bearing few spikelets. Panicle axis angular, scaberulous, glabrous. Panicle branches glabrous in axils. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 1–4.5 mm long, scabrous, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.4–2.9 mm long, 0.9–1.1 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1–1.6 mm long, 0.4–0.6 length of spikelet, membranous, without keels, 1–7 -veined. Lower glume apex acute. Upper glume ovate, 2.2–2.7 mm long, 1 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.2–2.7 mm long, 1 length of spikelet, membranous, 9–11 -veined, acute. Palea of lower sterile floret 2–2.4 mm long. Fertile lemma ovate, dorsally compressed, 1.9–2.1 mm long, 0.8–1 mm wide, indurate, yellow, shiny, without keel, 7 -veined, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long, orange. Caryopsis with adherent pericarp, ellipsoid, 1.5 mm long, dark brown. Embryo 0.4 length of caryopsis. Hilum elliptic.

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

Country /Province /State. Mexico. Gulf (Mexico). Caribbean, Brazil, Southern South America. Cuba. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Uruguay.

TDWG4. Mato Grosso, Sao Paulo Parana, Catarina, Rio Grande do Sul. Buenos Aires, Corrientes, Entre Rios, Santa Fe. Veracruz.

Panicum graciliflorum Rendle. *Cat. Welw. Afr. Pl.* ii. 181. (1899).

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

TYPE from Angola. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *Welwitsch 2959*, Angola: Golungo Alto (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. gracilis*, slender; flos, flower. Primary inflorescence branches filiform.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms slender, 70–130 cm long. Ligule a ciliate membrane. Leaf-blades 14–35 cm long, 3–5 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 7–30 cm long, contracted about secondary branches. Primary panicle branches spreading. Panicle branches glabrous. 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, 2–2.5 mm long, falling entire.

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

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

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Angola, Mozambique, Zambia.

Panicum grande Hitchcock & Chase. *Contrib. US. Nat. Herb.* xvii. 529 (1915).

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 Panama. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: A.S. *Hitchcock 9178* [= *Amer. Grass Natl. Herb.* 545], 15 Dec 1911, Panama: Canal Zone: in the water of a swamp along the margin of Gatun Lake (US-693329, US-693330, US-693331; IT: F, G, ISC, K, LL, MO-848738, NY, P, SI, W).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (277, Fig. 247), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (197, Fig. 146), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (365, Fig 133), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (392, Fig 70).

Derivation (Clifford & Bostock 2007): *L.* tall. Plants robust with tall culms.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Stolons absent or present. Culms decumbent, robust, 200–400 cm long, 10–15 mm diam., rooting from lower nodes. Culm-nodes pubescent. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 1–2.5 mm long. Leaf-blades elliptic, 35–75 cm long, 30–50 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 55–70 cm long, 25–40 cm wide, contracted about secondary branches. Primary panicle branches ascending or spreading, whorled at most nodes. Spikelets appressed, 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, acute, 2.5–2.9 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.6–2 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 2–2.5 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

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

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

$2n = 20$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Gulf (Mexico), Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Costa Rica, Guatemala, Honduras, Panama. Cuba, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil North.

Veracruz. Chiapas, Tabasco.

Panicum grandiflorum Stapf. *Prain, Fl. Trop. Afr.* ix. 681 (1920).

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

TYPE from Ethiopia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *Schimper 205*, 20 Jun 1837, Ethiopia: Selleuda (WAG. IST: BR, GOET, K, M, W, US-1061575). ST: *Petit s.n.*, Ethiopia: Choa (P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. granum, grain; flos, flower. The anthoecium is smooth and glossy resembling a grain.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Culms 30–150 cm long. Ligule a ciliate membrane. Leaf-blades 10–25 cm long, 2–5 mm wide, glaucous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, (7–)12–25(–35) cm long. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.33–0.66 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute or acuminate.

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 or acuminate. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Malawi, Mozambique, Zambia, Zimbabwe. Botswana.

Panicum graniflorum Stapf. *Fl. Trop. Afr.* 9: 681 (1920).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (194, Fig. 141).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Culms 30–150 cm long. Ligule a ciliate membrane. Leaf-blades 10–25 cm long, 2–5 mm wide, glaucous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, (7–)12–25(–35) cm long. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.33–0.66 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute or acuminate.

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 or acuminate. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa and Southern Africa. Angola, Malawi, Mozambique, Zambia, Zimbabwe.

Panicum griffonii Franch. *Bull. Soc. Hist. Nat. Autun*, viii. 342 (1895).

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

TYPE from Gabon & Zaire. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Griffon du Bellay s.n.*, Gabon (P; IST: K). ST: *Hense 284*, Zaire: champs de manioc, à Lutété (?; IST: P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Griffon du Bellay (-) who collected in Gabon.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms slender, 20–40(–80) cm long. Ligule a ciliate membrane. Leaf-blades tapering towards sheath, 10–22 cm long, 2–6 mm wide. Leaf-blade surface pubescent or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 10–20 cm long. Primary panicle branches ascending or spreading. Panicle branches flexuous, 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, 2–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.66–0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume surface pilose, with tubercle-based hairs. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface pilose, with tubercle-based hairs. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, pilose, with tubercle-based hairs, acuminate. Fertile lemma oblong, dorsally compressed, 1.5–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. *N* = 18 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa. Ghana, Guinea, Ivory Coast, Liberia, Nigeria, Senegal, Sierre Leone. Gabon, DRC. Tanzania, Uganda. Angola.

Panicum grumosum Nees. *Agrost. Bras.* 182. (1829).

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

TYPE from Paraguay, Brazil & Uruguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *F. Sellow s.n.*, Paraguay, (LE). de Schlechtendal 1827 : fig.. ST: *F. Sellow s.n.*, Brazil: Brasilia meridionalis (B; IST: BAA (fragm.), L, LE, P). IST: *F. Sellow 174*, no date, Brazil (US-974656 (fragm. ex LE), US-974655 (fragm. ex LE)). ST: *Sellow s.n.*, Uruguay: Montevideo (B; IST: BAA (fragm.), P, W, US-2830907 (fragm. ex LE)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (623, Fig. 135 & 649, Fig. 139), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (298, Fig. 118), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (551, Fig. 145), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (250, Fig. 70), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (330, Fig. 139).

Derivation (Clifford & Bostock 2007): L. broken into grains or small tubercles. Lemma surface irregularly sculptured in to tile-like areas.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, 130–200 cm long. Culm-internodes terete, 8–30 cm long, distally glabrous. Culm-nodes purple, glabrous. Lateral branches ample, arising from upper culm. Leaf-sheaths 9–20 cm long, glabrous on surface. Ligule an eciliate membrane, 1.2–2 mm long. Collar dark, glabrous. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 14–44 cm long, 6–30 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–45 cm long, 3.5–13 cm wide, contracted about secondary branches. Primary panicle branches ascending. Panicle axis scabrous. Panicle branches scabrous. Spikelets in pairs. 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, dorsally compressed, obtuse, 2.3–3 mm long, 0.5–1 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1–1.7 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume primary vein scabrous. Lower glume lateral veins transversely connected at apex. Lower glume apex acute. Upper glume elliptic, 1.8–2.5 mm long, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 2–2.6 mm long, 0.5–0.7 mm wide, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute, scabrous. Palea embraced by lemma, involute, chartaceous.

Flower and Fruit. Anthers 3. Caryopsis obovoid, 1.1–1.3 mm long, light brown. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, and Southern South America. Brazil West Central, Brazil Southeast, Brazil North, Brazil South.

Mato Grosso, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Panicum guatemalense Swallen. *Journ. Wash. Acad. Sc.* xxiii. 460. (1933).

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. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *P. Weatherwax* 182, 25 Mar 1932, Guatemala: just south of Quezaltenango (US-1538064). Publication cites collection number as 1689.

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms 75 cm long. Culm-internodes scaberulous, distally pilose, with tubercle-based hairs. Lateral branches ample. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane, 0.2 mm long. Collar pubescent. Leaf-blades lanceolate, 7–12 cm long, 4–10 mm wide. Leaf-blade surface scaberulous, pilose, with tubercle-based hairs. Leaf-blade margins cartilaginous, scabrous.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 10 cm long, contracted about primary branches. Primary panicle branches appressed or ascending, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 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, 2.2–2.4 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–1 mm long, 0.25–0.33 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

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

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Gulf (Mexico), Southeast Mexico. Mesoamerica. Guatemala. Veracruz. Chiapas.

Panicum habrothrix Renvoize. *Kew Bull.* xxii. 486 (1968).

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>: *vide* TROPICOS and Kew Synonymy Database: Zambia: Mwinilunga District: just S of MAtonchi Farm, in Brachystegia woodland, 24 Jan 1938, *Milne-Redhead* 4305 (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk *habros*, delicate; *thrix*, hair. Plant invested with a mixture of long and short, glandular and non-glandular hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 12–60 cm long. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades lanceolate, 1.5–4.5 cm long, 4–15 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 3–8 cm long. Panicle branches pilose, with clavellate hairs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate, hairy at tip (exceeding spikelet).

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 2–2.2 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -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, 9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.2 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa. Burundi. Zambia.

Panicum haenkeanum J. & C. Presl. *Rel. Haenk.* i. 304. (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Haenke s.n.*, Mexico (PR; IT: US-2808921 (fragm. ex PR & photo)).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (198, Fig. 147).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Thaddaeus Peregrinus Xaverius Haenke (1761–1816), Bohemian botanist who travelled widely in the Pacific.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 100–200 cm long, 1 mm diam., rooting from lower nodes. Culm-internodes distally pubescent. Culm-nodes glabrous. Lateral branches ample, arising from lower culm or mid culm. Leaf-sheaths pubescent. Ligule an eciliate membrane, 0.3–0.5 mm long. Collar bearded. Leaf-blades lanceolate, 3–10 cm long, 4–10 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–16 cm long. Spikelets spreading, solitary. Fertile spikelets pedicelled. Pedicels present, filiform, flexuous.

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, 2.4–2.6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 2.2–2.3 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume ovate, 2.2–2.5 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.2–2.5 mm long, 1 length of spikelet, membranous, 5 -veined, puberulous, acute. Fertile lemma elliptic, dorsally compressed, 1.7 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.9–1 mm long, brown.

$2n = 20$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Gulf (Mexico), Southeast Mexico. Mesoamerica, Northern South America, Western South America, Brazil. Belize, Costa Rica, Honduras, Nicaragua, Panama. Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast. Veracruz. Chiapas.

Panicum hallii Vasey. *Bull. Torrey Bot. Club*, xi. 61. (1884).

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 USA. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *E. Hall 816*, 18 May 1872, USA: Texas: Travis Co.: dry hills, Austin (US-76926; IT: NU).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (468 as subsp. *hallii* & *filipes*), F.W.Gould, *The Grasses of Texas* (1975) (475, Fig. 253 as var. *hallii* & var. *filipes*).

Derivation (Clifford & Bostock 2007): in honor of Elihu Hall (1822–82) United States farmer and amateur botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Butt sheaths persistent and investing base of culm, with curly dead sheaths. Culms erect or geniculately ascending, 20–80 cm long. Culm-internodes glaucous. Culm-nodes glabrous or pubescent. Leaves mostly basal. Leaf-sheaths glabrous on surface or hirsute, with tubercle-based hairs. Ligule a fringe of hairs, 1–1.5 mm long. Leaf-blades 4–30 cm long, 2–10 mm wide, stiff, glaucous. Leaf-blade surface glabrous or hirsute, sparsely hairy, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 6–20 cm long. Primary panicle branches ascending. Panicle branches stiff. Spikelets appressed, 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, acute or acuminate, 2.2–3.7(–3.9) mm long, 1–1.5 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.66 length of spikelet, membranous, without keels, 5 -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, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic or ovate, dorsally compressed, 2–3.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG), Continent. North America.

Country /Province /State. Northwest USA, North-central USA, South-central USA, Southeastern USA, Mexico. Oklahoma. New Mexico, Texas. Louisiana. Central Mexico, Northeast Mexico, Southwest Mexico.

TDWG4. Puebla. Aguascalientes, Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas. Jalisco, Michoacan, Oaxaca.

Panicum hanningtonii Stapf. *Prain, Fl. Trop. Afr.* ix. 676 (1920).

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

TYPE from Uganda. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: "Nile Land. Uganda or British East Africa: 2–7 [degr.] South Lat., without precise locality, ...", *Hannington s.n.* ; HT: *Hannington s.n.*, K.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of James Hannington (1847–1885) English-born Ugandan cleric and plant collector.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, robust, 90–150(–180) cm long, without nodal roots or rooting from lower nodes. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane. Leaf-blade base amplexicaul. Leaf-blades 15–45 cm long, 8–18 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, dense, 20–35 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, (2–)2.5–3 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 1.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa. Tanzania. Malawi, Mozambique, Zambia.

***Panicum haplocaulos* Pilger. *Engl. Jahrb.* iii. 49. (1902).**

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

TYPE from Sudan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *G.A. Schweinfurth 2003*, 1869, Sudan: Bahr Al-Ghazal (K, US-1720119).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. haploos, single; kaulos, stem. Culms unbranched.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms slender, 30–60 cm long. Ligule a ciliate membrane. Leaf-blades parallel-sided, 7–25 cm long, 2–6 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–20 cm long. Primary panicle branches spreading. Panicle branches capillary. 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, acute, 2–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2.5 mm long, indurate, dark brown or black, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa. Senegal. Chad, Ethiopia (inc. Eritrea), Sudan. Tanzania. Malawi, Zambia.

***Panicum harleyi* Salariaio, Morrone & Zuloaga. *Syst. Bot.* 36 (1): 55 (2011).**

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Bahia, Rio de Contas, ca 5 km da cidade em direç o ao Pico das Almas, 13°32'.58"S. 41°51'03"W, 1,107 m, 1 Aug 2006, *R.M.Harley 55486* (holotype: HUEFS).

Illustrations (Journals): *Systematic Botany* (36 (1): 57, Fig.4 (2011)).

Classification. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent, 50 cm long, rooting from lower nodes. Culm-internodes elliptical in section, thin-walled, 3–7 cm long, distally glabrous. Culm-nodes constricted, brown, glabrous. Leaf-sheaths 2–7 cm long, mostly shorter than adjacent culm internode, striately veined, glabrous on surface, outer margin hairy. Ligule a fringe of hairs, 0.7 mm long. Collar glabrous. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 7–13 cm long, 3–6 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle 11 cm long, glabrous. Panicle open, pyramidal, 15 cm long, 7 cm wide, contracted about primary branches. Primary panicle branches 11 in number, distant, 2.5–5.5 cm long, bearing 3–4 fertile spikelets on each lower branch. Panicle axis with lower internodes 1–4.5 cm long, hispid. Panicle branches glabrous in axils or pubescent in axils. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, clavate, 1–5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.5–2.6 mm long, 0.8–1 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume elliptic, 1.5–1.7 mm long, 0.66 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume elliptic, 2.5–2.6 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume primary vein scabrous. Upper glume surface papillose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, papillose, acute. Fertile lemma elliptic, dorsally compressed, 2.3–2.5 mm long, 0.6–0.7 mm wide, indurate, without keel, 5 -veined, more than 3-veined. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Lodicules 2, cuneate, 0.3 mm long. Anthers 3, 1.4 mm long. Caryopsis with adherent pericarp, ovoid, 1.1 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Panicum havardii Vasey. *Bull. Torrey Bot Club.* xix.:95 (1887).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Harvard s.n.*, 1881, USA: Texas: Guadalupe Mountains (US-82407).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Valery Havard (1846–1927) United States physician and amateur botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes elongated, scaly. Culms decumbent, 70–160 cm long. Culm-internodes glaucous, distally glabrous. Leaf-sheaths without keel, glabrous on surface. Ligule a ciliate membrane, 2–4 mm long. Leaf-blades flat or conduplicate, 5–10 mm wide, glaucous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–40 cm long. Primary panicle branches spreading. Panicle branches stiff. 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, acuminate, 6–8 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.4–0.66 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex attenuate.

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, attenuate. Fertile lemma elliptic, dorsally compressed, 4.5–6 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA, Mexico. New Mexico, Texas. Southeast Mexico. Chiapas.

Panicum hayatae A.Camus. *Lecomte, Not. Syst.* iv. 46 (1923).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*.

TYPE from Annam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Hayata 94*, (P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Bunzo Hayata (1874–1934) Japanese botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms rambling, 60–100 cm long. Lateral branches sparse. Leaf-sheaths outer margin hairy. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades lanceolate, 9–14 cm long, 9–15 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 12–16 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 0.66–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume lateral veins prominent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, scarious, 9 -veined, prominently veined, obtuse. Fertile lemma ovate, dorsally compressed, 2.5 mm long, indurate, grey, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 1.6 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China, Malesia. Thailand. Malaya.

Panicum hemitomom Schult. *Mant.* 2: 227. (1824).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

Basionym or Replaced Name: *Panicum walteri* Muhl., *Descr. Gram.* 108 (1817)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: No loc. nor specimen cited. Probably Georgia.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (486), F.W.Gould, *The Grasses of Texas* (1975).

Derivation (Clifford & Bostock 2007): Gk. hemi-, half; tomon, cutting. Aquatic culms rigid but soft and flacid about the water line so liable to lean as if partly severed.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Stolons present. Butt sheaths pilose. Culms decumbent, 50–150 cm long. Ligule a ciliate membrane, 1 mm long. Leaf-blades lanceolate, 12–30 cm long, 7–15 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 10–30 cm long, 1–1.5 cm wide, contracted about primary branches. Primary panicle branches appressed, 2–10 cm long, bearing spikelets almost to the base. Panicle branches bearded in axils. 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, 2–2.6 mm long, falling entire.

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

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Palea of lower sterile floret 0.9 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.8–2.4 mm long, cartilaginous, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, cartilaginous.

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA, Southeastern USA. Texas. Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina.

Panicum hillebrandianum Hitchcock. *Mem. Bishop Mus., Honolulu*, viii. 197 (1922).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *W. Hillebrandt s.n.*, no date, Hawaii: Maui Co. (US-80774 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-anum*, indicating connection. In honor of Wilhelm Hillebrand (1821–1886) German physician and botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 10–20 cm long. Leaf-sheaths longer than adjacent culm internode, hirsute. Ligule a ciliate membrane, 2 mm long. Leaf-blades ascending, linear or lanceolate, 3–6 cm long, 6–7 mm wide, indurate. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5 cm long. Primary panicle branches ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2 mm long, indurate, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum hillmanii Chase. *Journ. Wash. Acad. Sc.* xiv. 345. (1924).

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).

TYPE from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 16206, 11 Aug 1918, USA: Texas: Amarillo (US-1037542).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (462, Fig 394).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): in honor of Frederick Hebard Hillman (1863–1954) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

From *Panicum capillare* var. *hillmannii*.

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–65 cm long. Culm-internodes distally hispid, with tubercle-based hairs. Culm-nodes pubescent. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a fringe of hairs, 1.7–2.5 mm long. Leaf-blades 9–15 cm long, 5–12 mm wide, glaucous. Leaf-blade surface hispid, hairy on both sides, with tubercle-based hairs. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–30 cm long, 0.5–0.66 of culm length. Primary panicle branches spreading. Panicle branches stiff, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 2.4–3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acuminate. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 2 mm long, 1.1–1.3 mm wide, indurate, dark brown, shiny, without keel. Lemma surface with distinct germination flap. Lemma margins involute. Palea involute, indurate.

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

Country /Province /State. Australia. South Australia, Victoria, Tasmania. North-central USA, Southwestern USA, South-central USA. Iowa, Kansas, Oklahoma. California. New Mexico, Texas.

TDWG4. Southern.

Panicum hippothrix K. Schum. ex Engl. *Abh. Preuss. Akad. Wiss.* 1894: 22 (1895).

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 Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ghasal -- Quellengebiet, Mewa, *Holst* 3177 (K).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (327, Fig 286).

Derivation (Clifford & Bostock 2007): Gk. hippos, coarse; thrix, hair. Hairs on leaf-blades sometimes gathered in a beard towards the base.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms robust, 30–100 cm long. Ligule a ciliate membrane. Leaf-blades parallel-sided, 15–50 cm long, 2–8 mm wide. Leaf-blade venation without cross veins or with distinct cross veins. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Panicle open, oblong or ovate, 25–40 cm long. Primary panicle branches ascending or spreading. Panicle branches stiff. 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, 3.5–4.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66–0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma oblong, dorsally compressed, 3–4 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

Country /Province /State. Northeast tropical Africa, East tropical Africa. Somalia. Kenya, Tanzania. Indian Subcontinent. India.

TDWG4. Maharashtra.

Panicum hirstii Swallen. *Rhodora*, lxiii. 236 (1961).

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

TYPE from USA. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *F. Hirst* 47, 7 Jun 1959, USA: New Jersey (US-2306491).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Frank Hirst (fl. 1959).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 55–80 cm long. Culm-internodes distally glabrous. Lateral branches sparse. Leaves all alike. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface, outer margin glabrous or hairy. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades erect or ascending, 4.5–11 cm long, 3–5.5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 4.5–9 cm long, 0.5 cm wide. Primary panicle branches appressed, 1–2.5 cm long. Panicle branches scaberulous. 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, dorsally compressed, 1.8–2.1 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5–0.8 mm long, 0.33 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined. Fertile lemma elliptic, dorsally compressed, 1.8–2.1 mm long, indurate, pallid or yellow, without keel, more than 3-veined. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Northeast USA. New Jersey.

Panicum hirsutum Sw. *Fl. Ind. Occ.* i. 173. (1797).

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

TYPE from Jamaica. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Habitat in Jamaicae et Hispaniolae graminosis, *Swartz s.n.*.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (465), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (259, Fig. 212), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (199, Fig. 150).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 250, Fig.21 (1996)).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 100–200 cm long, 5–10 mm diam. Culm-nodes constricted, pubescent. Lateral branches sparse, arising from mid culm. Leaf-sheaths hispid, with tubercle-based hairs. Leaf-sheath oral hairs setose (behind ligule), erect. Ligule a ciliate membrane, 1.5–2 mm long. Collar bearded. Leaf-blades 35–70 cm long, 10–25 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Peduncle 10–22 cm long. Panicle open, elliptic, dense, 30–50 cm long, 7–15 cm wide. Primary panicle branches ascending, bearing spikelets almost to the base. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–1.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, 1.8–2.1 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.9–1.2 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1.8–2.1 mm long, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1.8–2.1 mm long, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 0.66 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.3–1.4 mm long, indurate, shiny, without keel. Lemma lateral veins distinct. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.7 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 1 mm long, pallid.

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

Country /Province /State. **South-central USA, Mexico.** Texas. Northeast Mexico, 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, Windward Islands, Trinidad-Tobago. Guyana, Venezuela. Colombia, Ecuador. Brazil North. Paraguay.

TDWG4. Chaco. San Luis Potosi. Veracruz. Colima, Jalisco, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Panicum hirticaule J. & C. Presl. *Rel. Haenk.* i. 308 (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Haenke s.n.*, no date, Mexico: Guerrero: Acapulco (PR; IT: LE-TRIN-0745.01, MO-1837663, US-80698 (fragm. ex PR & photo)).

Recent Synonyms: *Panicum sonorum* Beal., *Grasses N. Amer.* 2: 130 (1896).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (463 as subspecies *hirticaule* & *stramineum* & *sonorum*), F.W.Gould, *The Grasses of Texas* (1975) (449, Fig. 238), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (257, Fig. 209), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (244, Fig. 68).

Derivation (Clifford & Bostock 2007): L. *hirtus*, hairy; *caulis*, stem. Culms hairy.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending or decumbent, 25–80 cm long, 1–2.5 mm diam., rooting from lower nodes. Culm-internodes distally glabrous or hispid, with tubercle-based hairs. Culm-nodes pubescent. Lateral branches ample, arising from lower culm or mid culm. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliate membrane, 1.5–2.5 mm long. Leaf-blades 7–27 cm long, 6–15 mm wide. Leaf-blade surface glabrous or pilose, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Peduncle pubescent above. Panicle open, ovate, 13–35 cm long. Primary panicle branches 6–13 cm long. Panicle branches straight. Spikelets appressed, 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, acute, 2.4–2.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.2–1.5 mm long, 0.5–0.66 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 2.1–2.2 mm long, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.2–2.4 mm long, 1 length of spikelet, membranous, 9 -veined, acute. Palea of lower sterile floret 0.33 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.5–1.8 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.9–1 mm long, orange. Caryopsis with adherent pericarp, ellipsoid, 1.3–1.4 mm long, pallid.

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

Country /Province /State. Southwestern USA, South-central USA, Mexico. Arizona, California, Nevada, New Mexico, Texas. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Haiti, Leeward Is, Puerto Rico, Venezuelan and Netherlands Antilles. Venezuela. Colombia, Ecuador, Galapagos, Peru. Paraguay.

TDWG4. Mexico State, Morelos. Chihuahua, Guanajuato, Queretaro, Zacatecas. Veracruz. Baja California, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas, Tabasco, Yucatan.

Panicum hispidifolium Swallen. *Contrib. U. S. Nat. Herb.* xxix. 424: (1950).

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).

Basionym or Replaced Name: *Panicum hispidum* Swallen, *Contr. U.S. Natl. Herb.* 29(6): 269–270 (1948) [1949].

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.V. Rodriguez 1981*, 1 Jan 1944, Honduras: El Paraiso: Güinope (US-1869144; IT: F-1166244, F-1306220).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (195, Fig. 143).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 255, Fig.22 (1996)).

Derivation (Clifford & Bostock 2007): *L. hispidus*, bearing coarse stiff hairs; folium, leaf. Leaves hairy.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms 50 cm long. Culm-internodes distally glabrous or hispid. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliate membrane, 2–3 mm long. Leaf-blades 15 cm long, 8 mm wide. Leaf-blade surface hispid, with tubercle-based hairs. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle, terminal and axillary. Peduncle hispid above. Panicle open, ovate, 23 cm long, 15 cm wide. Primary panicle branches appressed. Panicle branches stiff, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–8 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3.5–3.6 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 2–2.2 mm long, 0.6–0.7 length of spikelet, membranous, without keels, 5 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma elliptic or ovate, dorsally compressed, 2.3–2.4 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America.** Costa Rica, El Salvador, Honduras, Nicaragua. Venezuela. Colombia. Oaxaca. Chiapas.

Panicum hochstetteri Steud. *Syn. Pl. Gram.* 90 (1854).

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

TYPE from Ethiopia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *G.H.W. Schimper 115*, 3 Oct 1837, Ethiopia: Tigre (P; IST: K, L, US-1093884). ST: *Quartin Dillon s.n.*, Ethiopia: Ambaetcha (P).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (208, Fig 86).

Derivation (Clifford & Bostock 2007): in honor of Christian Gottlob Ferdinand Hochstetter (1829–84) German anthropologist and geologist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect or rambling, slender, 20–60 cm long. Ligule a ciliate membrane. Leaf-blades spreading or reflexed, lanceolate, parallel-sided, 3–7(–12) cm long, 5–15 mm wide. Leaf-blade venation without cross veins or with distinct cross veins. Leaf-blade surface glabrous or pilose. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–6(–13) cm long. Panicle branches capillary. 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, obtuse or acute, 2–2.5(–3) mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong or ovate, 0.66 length of spikelet, membranous, dark green, without keels, 3(–5) -veined. Lower glume lateral veins ribbed. Lower glume surface glabrous or pubescent. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, dark green, without keels, 7 -veined. Upper glume lateral veins ribbed. Upper glume surface glabrous or pubescent. 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, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 54$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa. Ghana, Nigeria, Sierre Leone. Cameroon, Annobon, Principe & Sao Tome, Rwanda, DRC. Eritrea, Ethiopia (inc. Eritrea). Kenya, Tanzania, Uganda.

TDWG4. Entre Rios.

Panicum homblei Robyns. *Mem. Inst. Col. Belge*, 4to, *Sect. Sc. Nat. & Med.* i. Fasc.6 reimpr. p. 35 (1932).

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

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *H.A. Homble 134*, Feb 1912, Zaire: Shaba (US-1538737 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Henri Antoine Homble (1883–1921) Belgian botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Basal innovations intravaginal. Culms erect, slender, 40–60 cm long, firm, 2–3 -noded. Culm-internodes unequal, the upper longer, terete, striate, distally glabrous. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths deciduous, longer than adjacent culm internode, glabrous on surface to pubescent, outer margin hairy. Ligule a ciliolate membrane. Leaf-blades 12–18 cm long, 2–5.5 mm wide, stiff. Leaf-blade surface glabrous to pubescent. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, oblong or ovate, 12–18 cm long. Primary panicle branches ascending, 1 -nate, subdividing 3–4 times, rebranched near base, 6–9 cm long. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, unequal, 4–8 mm long, 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 lanceolate or ovate, dorsally compressed, acute, 2.5 mm long, falling entire, readily shedding fertile florets.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 5 -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, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, chartaceous, pallid, without keel, more than 3-veined. Lemma surface tuberculate (verruculose). Lemma margins involute. Lemma apex acute. Palea involute, chartaceous. Palea surface tuberculate (verruculose).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. DRC.

Panicum humidorum Buch.-Ham. ex Hook.f. *Fl. Brit. India* 7:53 (1896).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Hamilton in Wallich 8721*, (K). LT designated by Veldkamp, *Blumea* 41: 193 (1996).

Illustrations (Books): H.B.Gilliland, *Grasses of Malaya* (1971) (Pl 5).

Derivation (Clifford & Bostock 2007): *L. humidus*, moist. Growing in moist places.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 30–150 cm long. Culm-nodes glabrous. Leaf-sheaths outer margin hairy. Ligule a ciliate membrane. Leaf-blade base broadly rounded or cordate. Leaf-blades linear or lanceolate, 5–20 cm long, 4–10 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 10–40 cm long, 2–20 cm wide. Primary panicle branches 2–20 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–8 mm long, scaberulous.

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

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1–1.5 mm long, 0.9 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, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1–1.25 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.5–1 mm long. Caryopsis with adherent pericarp.

N = 18 (2 refs TROPICOS).

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China, Malesia. Myanmar, Thailand. Borneo, Java, Sumatra, Malaya.

TDWG4. Sikkim. Assam, Nagaland. Kerala.

Panicum humile Steud. *Syn. Pl. Glum.* 1:84 (1854).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (as *P. austroasiaticum*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987) (as *P. austro-asiaticum*).

TYPE from Sri Lanka. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sri Lanka:, *C.P. Thwaites 3243* (HT: P; IT: B, BO, K, PDA, US).

Recent Synonyms: *Panicum walense* Mez, *Engl. Jahrb.* 34: 146. (1904). *Panicum austro-asiaticum* Ohwi, *Acta Phytotax. & Geobot., Kyoto* 11: 45 (1942).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (335, Fig 125 as *P. walense*), C-C Hsu, *Taiwan Grasses* (1975) (572 as *P. watense*), H.J.Noltie, *The Grasses of Bhutan* (2000) (691, Fig. 38 as *P. walense*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 713).

Derivation (Clifford & Bostock 2007): *L. low* growing. Short-statured in comparison with related species often prostrate.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, slender, 18–70(–90) cm long. Leaf-sheaths outer margin glabrous or hairy. Ligule a ciliate membrane. Leaf-blades tapering towards sheath, 7–20 cm long, 2–6 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, oblong or ovate, 5–15(–23) cm long. Primary panicle branches ascending or spreading. Panicle branches straight or flexuous, scaberulous, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 1.5–2 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5–0.75 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex acuminate, mucicous or mucronate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3(–5) -veined, acuminate. Fertile lemma oblong, dorsally compressed, 1–1.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Western Indian ocean. Gambia, Mali, Nigeria, Senegal, Sierre Leone, Niger. Sudan. Tanzania. Zambia. Madagascar. **China, Eastern Asia.** Hainan, China Southeast, Tibet. Japan, Taiwan. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia.** Bangladesh, Eastern Himalaya, India, Sri Lanka. Andaman Is, Laos, Myanmar, Thailand, Vietnam. Borneo, Malaya, Philippines, Sumatra.

TDWG4. Guangdong, Guangxi. Bhutan. Assam. Andhra Pradesh, Bihar, Kerala. Madhya Pradesh, Tamilnadu, West Bengal.

Panicum hygrocharis Steud. *Syn. Pl. Gram.* 72 (1854).

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:** *Panicum aquaticum* Hochst. ex A. Rich., *Tent. Fl. Abyss.* 2: 373 (1850). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Q. Dillon s.n.*, Crescit natans in paludibus et stagnis prope Assai in regno Tigré (P). ST: *Schimper abyss.*, *sect III.*, 1786, Ethiopia: in fossis aquosis prope Ferras-Mai (K).

Recent Synonyms: *Panicum repentellum* Napper, *Kirkia* 3 127 (1963).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. *hygros*, moisture; *charis*, favour. Growing in water or very moist habitats.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Stolons absent or present. Culms erect or geniculately ascending, slender, 30–60 cm long. Ligule a ciliate membrane. Leaf-blades flat, 5–12 cm long, 3–5 mm wide, herbaceous, firm. Leaf-blade surface glabrous or pilose. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 6–14 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.33 length of spikelet, hyaline, without keels, 0(–3) -veined. Lower glume lateral veins absent or obscure. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northern Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Egypt. DRC. Eritrea, Ethiopia (inc. Eritrea),

Somalia, Sudan. Kenya, Tanzania. Malawi, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, Gauteng, Mpumalanga, Free State.

Panicum hymenochilum Nees. *Fl. Afr. Austr.* 46. (1841).

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

TYPE from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: inter Omsamculo et Omcomas, *Drège s.n.*, South Africa (K).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (205, Fig 85).

Derivation (Clifford & Bostock 2007): Gk. hymen, membrane; chilos, green fodder. Spikelets green except for lemma of lower floret that has a hyaline margin.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, slender, 14–120 cm long, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blade base broadly rounded or cordate. Leaf-blades spreading or reflexed, lanceolate, 1.2–7(–8.5) cm long, 1.2–5(–10) mm wide. Leaf-blade surface glabrous or pilose, with simple hairs or clavellate hairs. Leaf-blade margins scaberulous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 2–10 cm long, contracted about primary branches. Primary panicle branches bearing spikelets almost to the base. Panicle branches glabrous (rarely) or pilose, with simple hairs or clavellate hairs. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, straight.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 2–2.5(–3) mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–3 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Guinea, Ivory Coast, Nigeria. Cameroon, Rwanda, DRC. Ethiopia (inc. Eritrea). Kenya, Tanzania, Uganda. Angola, Mozambique, Zambia, Zimbabwe. Botswana, Limpopo, Mpumalanga, Swaziland, Kwazulu-Natal, Eastern Cape. Madagascar.

Panicum ibitense A.Camus. *Bull. Soc. Bot. France*, lxxii. 371. (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar centr.: cime du Mont Ibity, ...", *Perrier de la Bathie* 10.771.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Mt. Ibity, Madagascar.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 60–100 cm long. Lateral branches sparse. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane. Leaf-blades linear or lanceolate, 7–10 cm long, 5 mm wide. Leaf-blade venation with 8 secondary veins. Leaf-blade surface glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, obovate, 8–16 cm long. Primary panicle branches appressed or ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–3 mm long.

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

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1.5–1.7 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 1.9 mm long, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma ovate, dorsally compressed, 2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.3 mm long.

Distribution (TDWG). Continent. Africa.

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

Panicum ikopense A. Camus. *Bull. Soc. Bot. France*, 99: 63 (1952).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Firingalava, chutes de l'Ikopa: Perrier 593.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 30–35 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheaths striately veined, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blade base broadly rounded. Leaf-blades linear or lanceolate, 10–15 cm long, 5–6.5 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 4.5–6 cm long. Primary panicle branches 4–5 cm long. Panicle axis glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1–2 mm long, glabrous, tip widened.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, recurved at apex and gaping. Lower glume ovate, clasping, 1.2–1.5 mm long, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 1-keeled, 7 -veined, acute, mucronate. Fertile lemma elliptic, dorsally compressed, 1.6–1.7 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum impeditum Launert. *Mitt. Bot. Staatssamml. Munchen*, viii. 150 (1970).

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

TYPE from Namibia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Namibia: Gideon Distr.: Mariental, 10 May 1955, *De Winter 3483* (HT: K; IT: M, PRE).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. empedio*, hinder, hence not completely formed. Lower floret sterile.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 20–50 cm long. Ligule a ciliate membrane. Leaf-blades 2–8 cm long, 3–6 mm wide. Leaf-blade surface papillose, rough adaxially.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, ovate, 6–15 cm long, contracted about primary branches. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.7–3.3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 0.33 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.5–3 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Namibia, Free State, Northern Cape.

Panicum inaequilatum Stapf & C.E. Hubb. *Bull. Misc. Inform. Kew* 1927: 267 (1927).

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

TYPE from Zimbabwe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Tropical Africa. S. Rhodesia: Umtali, 1560m., on hillsides in shade of bush and undergrowth, Feb. 1926...", *Herb. Dept. Agric. S. Rhod. [?Eyles] 3375* (HT: K).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect or decumbent, slender, 10–40(–60) cm long. Ligule a ciliate membrane. Leaf-blades 2–6 cm long, 2–6 mm wide. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 1.5–7 cm long. Primary panicle branches spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 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, 7 -veined. Upper glume surface pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, pilose, acute. Fertile lemma oblong, dorsally compressed, 1.5–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa. Tanzania. Malawi, Mozambique, Zimbabwe.

Panicum incisum Munro ex C. B. Clarke. *Journ. Linn. Soc.* xxv. 84 t. 33. (1889).

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: Nambre Forest, ..."[Assam, British India], "*in Griffith Kew, n. 6505.*" C.B. Clarke, *Coll. [Naga Hills, n. 40799]* (T:K ?).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. cut deeply. Lower glume deeply bifid.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms prostrate, 30–60 cm long. Leaves cauline. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, lacerate. Leaf-blades 10–15 cm long, 8–12 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, ovate, effuse, 20 cm long. Primary panicle branches sparsely divided. Panicle axis scaberulous. Panicle branches capillary, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, tip cupuliform.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acuminate, 4–5 mm long, falling entire. Rachilla internodes elongated between glumes.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume elliptic or ovate, 2.5 mm long, 0.5 length of spikelet, membranous, without keels, 3–4 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma ovate, dorsally compressed, 3 mm long, indurate, dark brown, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute or acuminate. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Assam.

TDWG4. Arunachal Pradesh. Assam, Nagaland.

Panicum incomtum Trin. *Gram. Panic.* 200 (1826).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Philippine Islands: Manila, *Chamisso s.n.* (HT: LE).

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (556), C-C Hsu, *Taiwan Grasses* (1975) (574, Fig. 1437), H.J.Noltie, *The Grasses of Bhutan* (2000) (691, Fig. 38), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 711).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.Domin, *Bibliotheca Botanica* 85 (1915) (316, Fig.72 as *P. sarmentosum* var. *prenticeanum*).

Derivation (Clifford & Bostock 2007): L. unadorned. Glumes and sterile lemma glabrous except for a few hairs at their apices.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling or scandent, 200–1500 cm long, 4–7 mm diam., woody. Culm-internodes 7–18 cm long. Lateral branches ample. Leaves cauline. Leaf-sheaths pilose, with tubercle-based hairs, outer margin glabrous or hairy. Ligule a ciliate membrane, 0.5–1 mm long. Leaf-blades lanceolate, 6–30 cm long, 10–25 mm wide, flaccid, light green or dark green, discolorous with last colour beneath. Leaf-blade surface glabrous or pubescent, densely hairy (when young). Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle pubescent above. Panicle open, elliptic or oblong, 8–16 cm long, 3–6 cm wide. Primary panicle branches ascending, 1–3 -nate, 3–8 cm long. Panicle axis pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, compressed slightly, subacute, 1.8–2.2 mm long, 0.8–1 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.75 length of spikelet, membranous, much thinner on margins, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, chartaceous, with hyaline margins, dark green, without keels, 5 -veined. Upper glume surface puberulous, hairy above. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, chartaceous, much thinner on margins, dark green, 5 -veined, puberulous, hairy above, acute. Fertile lemma elliptic, dorsally compressed, 1.5–1.8 mm long, indurate, yellow, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. *N* = 18 (2 refs TROPICOS).

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

Country /Province /State. China, Eastern Asia. China South Central, China Southeast. Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Eastern Himalaya, India. Myanmar, Thailand, Vietnam. Borneo, Java, Malaya, Philippines, Sulawesi, Sumatra. New Guinea. **Australia.** Queensland.

TDWG4. Fujian, Guangdong, Guangxi, Jiangxi. Yunnan. Bhutan. Assam, Meghalaya. North.

Panicum incumbens Swallen. *Contrib. U. S. Nat. Herb.* xxix. 417 (1950).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.A. Steyermark 31573*, 10 Nov 1939, Guatemala: Chiquimula: in cloud forest on top of Cerro Tixixi, 3–5 mi N of Jocotan (F-1039524; IT: US-2236476 (fragm. ex F)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. incumbens*, lie upon. Lateral inflorescence branches appressed to central axis.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 85 cm long. Culm-internodes distally pubescent. Lateral branches sparse. Leaf-sheaths longer than adjacent culm internode, hispid, with tubercle-based hairs. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades lanceolate, 13–22 cm long, 9–18 mm wide, coriaceous. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins cartilaginous, scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 6–25 cm long. Primary panicle branches appressed. Panicle axis scabrous, pilose. Panicle branches stiff, scabrous, 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 elliptic, dorsally compressed, acute, 2.9–3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.15–0.33 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2–6 mm long, indurate, without keel. Lemma surface striate, pubescent. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Southeast Mexico. **Mesoamerica, Caribbean.** Guatemala, Honduras, Nicaragua.

Chiapas.

Panicum isachnoides Hillebr. Fl. Hawaiian IIs. :501 (1888).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Wilkes Explor. Exped. s.n.*, no date, Hawaii: Maui Co. (US-974880).

Illustrations (Books): R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (17, Fig. 6).

Derivation (Clifford & Bostock 2007): Gk *-oides*, resembling. Resembling *Isachne* with respect to spikelets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, mat forming or caespitose, clumped densely. Culms decumbent, 5–20 cm long. Lateral branches ample. Leaves distichous. Leaf-sheaths pubescent. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades spreading, lanceolate, 1–3 cm long, 5–7 mm wide. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 1–2 cm long, bearing few spikelets. Primary panicle branches appressed, simple. 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, 2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.33 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 0.33 length of lemma. Fertile lemma elliptic, dorsally compressed, 2 mm long, indurate, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum issongense Pilger. *Notizbl. Bot. Gart. Berlin*, xv. 706 (1942).

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

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *H.J. Schlieben 2130*, 23 Apr 1932, Tanzania: Wanga Dist., Mahenge Plateau (K; US-2207495).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Isongo, East Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent or rambling, 60–100 cm long. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades lanceolate or ovate, 8–16 cm long, 15–35 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–35 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, 2–2.5 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.75–1 length of spikelet, membranous, without keels, (1–)3 -veined. Lower glume surface glabrous or pubescent. Lower glume apex acute or acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, glabrous or pubescent, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Kenya, Tanzania, Uganda.

Panicum juniperinum Nees. *Fl. Bras. Enum. Pl. 2* (1): 236 (1829).

TYPE from Reunion. **Basionym or Replaced Name:** HT: Aubert du Petit. s.n.; Habitat ? (B-W) [Reunion: Du Petit Thouars (P holo)].

Classification. Tribe: Paniceae. Subtribe PANICINAE .

Panicum kalahareense Mez. *Engl. Jahrb.* lvii. 187 (1921).

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

TYPE from Namibia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Schultze 356C*, no date, Namibia (US-80715 (fragm.)). ST: *Schultze 318*, Namibia ST: *Schultze 342p*, Namibia.

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):32, t. 6), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Kalahari Desert, south-west Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths pubescent. Culms robust, 100–200 cm long. Leaves mostly basal. Leaf-sheath oral hairs woolly. Ligule a ciliate membrane. Leaf-blades flat or involute, 20–50 cm long, 2–7 mm wide. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 19–27 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3–4 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -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, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2.5–3.5 mm long, indurate, pallid or dark brown, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Angola, Mozambique, Zimbabwe. Namibia, Botswana, North-West, Free State, Northern Cape.

Panicum kasumense S.A. Renvoize. *Kew Bull.*, 44(3): 546 (1989).

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

TYPE from Zimbabwe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zimbabwe: Hwange Dist.: Kazuma Range. 10 May 1972, *Simon 2187* (HT: SRGH; IT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Kazuma Range, Zimbabwe.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, weak, 10–35 cm long. Ligule a ciliate membrane. Leaf-blades 3–4.5 cm long, 2–5 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, oblong, 3–8 cm long, contracted about primary branches. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zimbabwe.

Panicum khasianum Munro ex Hook. f. *Fl. Brit. Ind.* vii. 54. (1896).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: Khasia Hills, in marshes, 4–6000 ft, *Griffith 6498* (LT: K; ILT: US-1445180 (fragm.)).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (691, Fig. 38), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 685).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. From the Khasia Hills, India.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms prostrate, 100–200 cm long, rooting from lower nodes. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or hispid, outer margin glabrous or hairy. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blade base cordate. Leaf-blades lanceolate, 15–30 cm long, 1.8–3 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–30 cm long. Primary panicle branches 7–15 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, obtuse or subacute, 2–2.25 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.75 mm long, 0.25 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume lanceolate or ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma ovate, dorsally compressed, 2–2.25 mm long, chartaceous, without keel. Lemma surface pubescent. Lemma margins involute. Lemma apex apiculate, woolly. Palea involute, chartaceous.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

N = 18 (2 refs TROPICOS).

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

Country /Province /State. China. China South Central. **Indian Subcontinent, Indo-China, Malasia.** Eastern Himalaya, India. Myanmar. Sumatra.
TDWG4. Yunnan. Darjeeling, Bhutan, Sikkim. Meghalaya, Nagaland. West Bengal.

Panicum konaense Whitney & Hosaka. *Occas. Papers Bishop Mus., Honolulu*, xii. No. 5, p. 3 (1936).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *L.D. Whitney 4136*, 7 Apr 1936, Hawaii: Hawaii I.: Hawaii Co. (US-1674369).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From the Kona district, formerly the Kingdom of Kona, Hawaii.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms 10–60 cm long. Culm-internodes distally glabrous or pilose, with tubercle-based hairs. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths puberulous or pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.8–1.6 mm long. Leaf-blades 5–18 cm long, 2–5 mm wide. Leaf-blade surface glabrous or puberulous or pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 4–16 cm long. Primary panicle branches ascending. Panicle axis scabrous, pilose. Panicle branches scabrous, glabrous or 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 lanceolate, dorsally compressed, acuminate, 1.5–3.9 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume surface pilose, hairy generally or above. Lower glume hairs 1–3 mm long. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous (or a few hairs). Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, acute. Palea of lower sterile floret 0.25–0.33 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.2–1.4 mm long, indurate, black, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.5–0.8 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum koolauense St. John & Hosaka. *Occas. Papers Bishop Mus., Honolulu*, xi. No. 13, 3 (1935).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *St. John 10178*, USA: Hawaii (NY; IT: UC, US).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Koolau Range, Oahu, one of the Hawaiian Islands.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, cushion forming. Culms geniculately ascending, 5–15 cm long. Leaf-sheaths outer margin hairy. Ligule a ciliolate membrane. Leaf-blades flat or convolute, 0.7–0.8 cm long, 1–1.8 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 2–3 fertile spikelets, shorter than basal leaves. 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, dorsally compressed, 2–2.3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.75 length of spikelet, membranous, much thinner on margins, without keels, 3 -veined. Lower glume apex

acute. Upper glume elliptic, 1 length of spikelet, membranous, with hyaline margins, without keels, 9 -veined. Upper glume surface asperulous, rough on veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, scaberulous, rough on veins, acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma oblong, dorsally compressed, 2 mm long, cartilaginous, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, cartilaginous.

Flower and Fruit. Lodicules 2, cuneate. Anthers 3, 0.7 mm long.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum lachnophyllum Benth. *Fl. Austral.* vii. 486. (1878).

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>: *vide* TROPICOS and Kew Synonymy Database: "Queensland. Moreton Bay, ...", *C. Stuart.*

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler,, *Grasses of New South Wales*, 4th edn (2008) (316), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (195, Fig. 30), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: K.Domin, *Bibliotheca Botanica* 85 (1915) (315, Fig.71 as var. *tropicum*).

Derivation (Clifford & Bostock 2007): Gk. lachnos, wool; phyllon, leaf. Leaf-blades densely hairy.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Stolons present. Basal innovations extravaginal. Culms decumbent, 15–30 cm long, wiry, 7–8 -noded, rooting from lower nodes. Lateral branches lacking or sparse. Leaf-sheaths striately veined, pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliolate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades spreading, linear or lanceolate, 1.5–10 cm long, 3–9 mm wide, firm. Leaf-blade midrib evident. Leaf-blade surface scabrous, pilose, with tubercle-based hairs. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 2–7 cm long. Primary panicle branches simple or sparsely divided. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long, scabrous, 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 oblong, dorsally compressed, obtuse or subacute, 2–2.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.25 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic or oblong, dorsally compressed, 1.75–2 mm long, indurate, without keel. Lemma surface striate. Lemma margins involute, pubescent. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. North, Central, South East. Coast.

Panicum lacustre Hitchcock & Ekman. *U. S. Dept. Agric., Misc. Publ. No.* 243: 253 (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 Cuba. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Ekman* 17878, 31 Oct 1923, Cuba: Pinar del Río: Laguna de la Máquina (US-1387529; IT: MO, NY-71083, US-1163098).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (471), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (254, Fig. 205).

Derivation (Clifford & Bostock 2007): L. lacus, lake; -estre, place of growth. Growing in or around lakes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 100–150 cm long, spongy, rooting from lower nodes. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane, 1–2 mm long. Leaf-blades flat or conduplicate, 15–30 cm long, 2 mm wide. Leaf-blade surface scaberulous, pilose, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–30 cm long, contracted about secondary branches. Primary panicle branches ascending, whorled at lower nodes. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–2 mm long.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.33 length of spikelet, membranous, without keels. Lower glume apex obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.8 mm long, indurate, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. Southeastern USA. Florida. **Caribbean.** Cuba.

Panicum laetum Kunth. *Rev. Gram.* ii. t. 113. (1831).

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

TYPE from Senegal. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Perrottet 971*, Senegal (P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. fruitful. Setting abundant grain.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 17–70 cm long. Leaf-sheaths glabrous on surface or pilose (rarely). Ligule a ciliate membrane. Leaf-blades linear or lanceolate, parallel-sided, 4–24 cm long, 5–10 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–20 cm long. Primary panicle branches spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Macaronesia, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Western Indian ocean. Cape Verde. Burkina, Gambia, Ghana, Mali, Mauritania, Nigeria, Senegal, Niger. Chad, Eritrea, Ethiopia (inc. Eritrea). Tanzania. Angola. Madagascar.

Panicum laevinode Lindl. *Mitchell, Three Exped. E. Austral., ed. 1, i. 235* (1838).

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>: *vide* TROPICOS and Kew Synonymy Database: LT: *Mitchell's expedition s.n. specimen no. 3*, Australia (CGE (right-hand specimen)). LT designated by Jacobs, *Kew Bull.* 40(3): 662 (1985).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (463, Fig 395), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (316), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (198, Fig. 31), D.Sharp & B.K.Simon, *AusGrass. Grasses of Australia. CD-Rom Version 1.0.* (2002), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:83(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass. Grasses of Australia. CD-Rom Version 1.0.* (2002);.

Derivation (Clifford & Bostock 2007): *L. laeve* - smooth and *node* (node), referring to the glabrous nodes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Butt sheaths sparsely hairy. Culms erect, 15–60 cm long, compressible, 2–4 -noded. Culm-internodes distally glabrous or pilose, with tubercle-based hairs. Culm-nodes brown, glabrous or pubescent. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1–2 mm long. Leaf-blades 5–20 cm long, 2.5–6 mm wide, flaccid. Leaf-blade midrib prominent beneath. Leaf-blade surface glabrous or pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–20 cm long. Primary panicle branches spreading, 1 -nate, branching divaricately. Panicle axis glabrous or pilose, with tubercle-based hairs. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.5–5 mm long, tip cupuliform.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, acuminate, 2.4–3.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume oblate, clasping, 0.33 length of spikelet, membranous, pallid, without keels, 0–5 -veined. Lower glume lateral veins absent or obscure. Lower glume apex truncate or obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, acuminate. Palea of lower sterile floret 0.75 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.75–2 mm long, indurate, pallid or light brown, shiny, without keel, 7 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, oblong, 1.5 mm long, pallid. Embryo 0.5 length of caryopsis. Hilum punctiform.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales.

TDWG4. Kimberley, Eremean. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern. North, Central, South East, Inland. Western Slopes, Western Plains.

Panicum lanipes Mez. *Engl. Jahrb.* Ivii. 187 (1921).

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

TYPE from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Meyer s.n.*, 1869, South Africa: Hatam's Berg, Calvinia (B; IT: PRE (fragm.)).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (337, Fig 294), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984).

Derivation (Clifford & Bostock 2007): *L. lana*, wool; *pes*, foot. Leaf-sheaths woolly at the base.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths woolly. Culms 20–90 cm long. Ligule a ciliate membrane. Leaf-blades 7–20 cm long, 2–3(–5) mm wide, glaucous. Leaf-blade surface glabrous or hirsute, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, (2–)2.5–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.66 length of spikelet, membranous, without keels, 0–3 -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, 5–7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Namibia, Botswana, Northern Cape.

Panicum larcomianum D.K.Hughes. *Kew Bull.* 1923, 326. (1923).

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: "Queensland: Mt. Larcom, Bick.", *Bick s.n.*

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (198, Fig. 31).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): L. *-anum*, denoting connection. From Mt Larcom, Queensland, Australia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Culms erect, 40–100 cm long, 4–8 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane, 0.7–1.3 mm long. Leaf-blades filiform, flat or conduplicate, 9–35 cm long, 2–4 mm wide. Leaf-blade surface smooth, glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or ovate, 12–26 cm long. Primary panicle branches ascending or spreading, 5–12 cm long, bearing 20–60 fertile spikelets on each lower branch. Panicle axis smooth or scabrous. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.8–4.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2–2.7 mm long, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.1 mm long.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume obovate, 0.5–0.8 mm long, 0.25–0.33 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex truncate or acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, acute or acuminate. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.6–2 mm long, indurate, without keel. Lemma lateral veins distinct. Lemma margins involute. Lemma apex obtuse or acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.8–1.1 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North, Central, South East, Inland.

Panicum laticomum Nees. *Fl. Afr. Austr.* 43. (1841).

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

TYPE from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Drège s.n.*, South Africa: Durban (Port Natal) (K).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (326, Fig 283).

Derivation (Clifford & Bostock 2007): L. *latus*, broad; *coma*, head of hair. Panicle very lax and erect, with filiform to capillary branches arranged in fascicles and so resembling a head of hair.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent or rambling, slender, 30–200 cm long. Ligule a ciliate membrane. Leaf-blade base asymmetrical. Leaf-blades lanceolate, tapering towards sheath, 6–10 cm long, (5–)10–28 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate or obovate, (6–)10–20(–24) cm long. Primary panicle branches profusely divided. Panicle branches capillary. 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, gibbous, acute, 1.5–2 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface glabrous or pilose. Lower glume apex acute. Upper glume oblong, 0.66 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 5–7 -veined, glabrous or pilose, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface granulose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Somalia. Kenya, Tanzania. Malawi, Mozambique, Zimbabwe. Limpopo, Swaziland, Kwazulu-Natal, Eastern Cape.

Panicum latzii R.D. Webster. *Australian Paniceae (Poac.)*: 132 (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 Australia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Victoria R. Crossing: *Symon 5214* (CANB holo, AHUC, K, NT).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): in honour of Peter Kenneth Latz (1941-) Australian plant ecologist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Cataphylls evident. Culms erect, 40–80 cm long, 3–8 -noded. Culm-nodes glabrous. Leaf-sheaths smooth, glabrous on surface, outer margin glabrous. Ligule a ciliate membrane, 1.2–3 mm long. Leaf-blades filiform, 14–40 cm long, 2.5–8 mm wide. Leaf-blade surface scabrous, glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–40 cm long. Primary panicle branches spreading, 15–30 cm long, bearing 24–80 fertile spikelets on each lower branch. Panicle axis scabrous. Panicle branches scabrous, bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–7 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.3–4.1 mm long, 1–1.3 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume obovate, 0.8–1.2 mm long, 0.25 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 9 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.2–2.5 mm long, indurate, without keel. Lemma lateral veins distinct. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.3–1.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley, Ereman. Darwin & Gulf, Victoria R & Barkly Tableland. North.

Panicum lepidulum Hitchcock & Chase. *Contrib. U. S. Nat. Herb.* xv. 75 (1910).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: C.G. Pringle 497, 22 Sep 1885, Mexico: Chihuahua: rocky hills near Chihuahua (US-155163; IT: F, MEXU, NY, US-742174, W).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 257, Fig.23 (1996)).

Derivation (Clifford & Bostock 2007): *L. lepidus*, pretty; *-ula*, diminutive. Plant attractive in appearance.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Culms erect, 25–70 cm long, wiry. Culm-nodes pubescent. Lateral branches sparse. Leaves cauline. Leaf-sheaths as wide as blade at the collar, pilose, with tubercle-based hairs. Ligule a ciliate membrane, 2 mm long. Leaf-blades erect or spreading, flat or conduplicate, 7–30 cm long, 5–10 mm wide, glaucous. Leaf-blade surface glabrous or pilose, hairy on both sides.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Peduncle scaberulous above, glabrous or pilose above. Panicle open, elliptic, 7–20 cm long, 3–10 cm wide. Primary panicle branches ascending. Panicle branches flexuous. 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, acuminate, 4–4.2 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume primary vein scabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, scabrous, rough on midvein (above), acute. Fertile lemma elliptic, dorsally compressed, 3–3.5 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 2.3–2.5 mm long.

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico. **Mesoamerica.** Guatemala.

TDWG4. Distrito Federal, Morelos, Puebla, Aguascalientes, Chihuahua, Durango, Guanajuato, Hidalgo, Queretaro, San Luis Potosi, Zacatecas. Sonora. Jalisco, Michoacan, Oaxaca.

Panicum leptolomoides A.Camus. *Bull. Mus. Hist. Nat. Paris*, . 514. (1924).

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

TYPE from Comores. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Comores (Boivin).", *Boivin s.n.* (HT: P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk *-oides*, resembling. Resembling *Leptoloma* with respect to inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 50–70 cm long, 3–4 mm diam. Culm-internodes distally glabrous. Lateral branches ample. Leaf-sheaths striately veined, glabrous on surface, outer margin hairy. Ligule a ciliate membrane. Leaf-blades lanceolate, 15–16 cm long, 9–14 mm wide. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, effuse, 15–22 cm long, 15–22 cm wide. Primary panicle branches 8–11 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 30–50 mm long, tip widened.

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, 4.5–4.8 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 4.4–4.7 mm long, 0.9 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume surface glabrous. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 4 mm long, pilose, adorned on flanks. Fertile lemma oblong, dorsally compressed, 3.5–3.7 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum leucoblepharis Trin. *Clav. Agrost.* 234 (1822).

Regarded by K as a synonym (*P. strigosum*).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. leukos, white; blepharis, eye-lash. Leaf-blades bearing long white hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, mat forming. Culms 6–15 cm long, 0.3–0.5 mm diam. Culm-internodes distally glabrous. Culm-nodes pubescent. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 0.1–0.2 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 2–6 cm long, 3–7 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 2–4 cm long, 1–3 cm wide. Panicle axis pilose. Panicle branches pilose. Spikelets spreading, 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 obovate, dorsally compressed, obtuse, 1.3–1.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.6–0.7 mm long, 0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1.2–1.3 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1.2–1.3 mm long, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, dorsally compressed, 1 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.3 mm long, purple.

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

Country /Province /State. South-central USA, Southeastern USA. Mesoamerica, Caribbean. Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico.

Panicum ligulare Nees ex Trin. *Gram. Panic.* 206 (1826).

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: ST: *K.F.P. von Martius s.n.*, Apr 1820, Brazil: Para (US-974617 (fragm. ex M & photo)). LT: *Martius 3800--floriferous part*, V. sp. imperfectum Brasil (n. ab Esenb.) (LE-TRIN-0792.01). LT designated by Zuloaga, *Ann. Missouri Bot. Gard.* 74(3): 475 (1987).

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (152, Fig. 54).

Derivation (Clifford & Bostock 2007): *L. ligula*, small tongue; *-aris*, pertaining to. Ligule conspicuous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Butt sheaths woolly. Culms erect, 130–200 cm long. Culm-internodes thick-walled or solid, 8–24 cm long, distally glabrous or pilose. Culm-nodes glabrous or pubescent. Leaf-sheaths 8–23 cm long, hispid, outer margin hairy. Ligule a ciliate membrane, 1.8–3.2 mm long. Collar pilose. Leaf-blade base broadly rounded. Leaf-blades linear or lanceolate, 30–55 cm long, 9–19 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or pilose, densely hairy, hairy on both sides. Leaf-blade margins scabrous, ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 47–65 cm long, 15–30 cm wide. Primary panicle branches spreading. Panicle branches scabrous, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 2–20 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 4.4–5.7 mm long, 1.2–1.6 mm wide, falling entire. Rhachilla internodes elongated between glumes. Floret callus evident, 0.8–1.1 mm long, winged, with lateral wings.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2.9–3.8 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 7–9 -veined. Lower glume primary vein scabrous. Lower glume inner surface pubescent. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acuminate. Palea of lower sterile floret 3–3.3 mm long.

Fertile lemma ovate, dorsally compressed, 2.5–3.2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, 2.4 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Venezuela. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast.

TDWG4. Mato Grosso, Goias, Bahia.

Panicum lineale H. St. John. *Phytologia*, 63(5): 370 (1987).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: USA: Hawaii: Kauai: ridge 1300 ft S of Kulanaililia, 1400 ft, steep ledges in openings in moderately wet forest, bunchgrass 11/2 ft tall, 4 Mar 1978, *Christensen 324* (HT: BISH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. linea*, linen thread; -ale, pertaining to. Leaf-blades long and narrow.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 55–126 cm long. Lateral branches lacking. Leaves mostly basal, distichous. Leaf-sheaths glabrous on surface or puberulous. Ligule a ciliate membrane, 0.4–0.5 mm long. Leaf-blades involute, 60–85 cm long, 4–9 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–35 cm long, 6–10 cm wide. Primary panicle branches spreading. Panicle axis glabrous. Panicle branches pubescent 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 lanceolate, dorsally compressed, acuminate, 4.1–4.8 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1.7–2.6 mm long, 0.4–0.5 length of spikelet, membranous, without keels, 3–7 -veined. Lower glume apex acute. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 0.2–0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.5–2.9 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2.2–2.4 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum longiloreum M.M. Rahman. *Kew Bull.*, 44(3): 485 (1989).

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

TYPE from Thailand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *A.F.G. Kerr 19709*, 23 Sep 1930, Thailand (L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. longus*, long; *loreum*, thong. Inflorescence whip-like.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms prostrate (floating), 100–250 cm long, spongy, rooting from lower nodes. Culm-internodes distally glabrous. Culm-nodes glabrous. Leaf-sheaths loose, longer than adjacent culm internode, glabrous on surface. Ligule a ciliate membrane, 2–2.5 mm long. Leaf-blades 10–35 cm long, 5–7 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 25–35 cm long, 3–6 cm wide. Primary panicle branches appressed or ascending, 10–20 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, acute, 2.2–2.5 mm long, 0.8–1 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume oblate, clasping, 0.2–0.5 mm long, 0.1–0.25 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume lateral veins with cross-veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, with cross-veins, acute. Fertile lemma elliptic, dorsally compressed, 1.7 mm long, 0.8–0.9 mm wide, indurate, yellow or light brown, shiny, without keel, 7 -veined, more than 3-veined. Lemma surface smooth. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Tropical Asia.

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

Panicum longipedicellatum Swallen. *Phytologia*, xiv. 79 (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Chase* 8342, 18 Jan 1925, Brazil: Rio de Janeiro: Serra de Itatiaia, Maceiras, 1000–1200 m, colony on wooded mountain slope, long decumbent base panicle open at maturity (but only 2 mature ones found) (US-1255492; IT: MO-923841).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (703, Fig. 150).

Derivation (Clifford & Bostock 2007): *L. longus*, long; pedicellus, stalk; -ata, possessing. Spikelets with long pedicels.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 100–160 cm long. Culm-internodes distally glabrous or hispid. Culm-nodes bearded. Leaf-sheaths narrower than blade at the collar, hispid, with tubercle-based hairs. Ligule a ciliate membrane, 3 mm long. Leaf-blades linear or lanceolate, 35–41 cm long, 23–36 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, ovate, 40 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 10–40 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acute, 4–4.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Lower glume lateral veins prominent. Lower glume surface tuberculate (papillose). Lower glume margins ciliate. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 3.5 mm long, indurate, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Minas Gerais, Rio de Janeiro, Espirito Santo, Catarina, Rio Grande do Sul.

Panicum longissimum (Mez) Henrard. *Meded. Herb. Leid.* NO. 54 A. 380 (1927).

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:** *Sacciolepis longissima* Mez, *Repert. Spec. Nov. Regni Veg.* 15: 122 (1918). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *B. Balansa* 2935, 1879, Paraguay: Paraguari: Yagaurón [25°34'S 57°16'W] (B; IT: BAA-2772 (fragm. ex B), K, US-1099181, US-1108605).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (250, Fig. 70).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Culms erect, 150–200 cm long. Culm-internodes terete, 30 cm long, distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths 10–30 cm long, keeled, striately veined, glabrous on surface, outer margin hairy. Ligule a ciliate

membrane, 2–2.4 mm long. Collar dark, pubescent. Leaf-blades linear or lanceolate, 50–80 cm long, 5–9 mm wide, stiff. Leaf-blade surface pubescent, hairy adaxially.

Inflorescence. Inflorescence a panicle. Peduncle 40–50 cm long, pubescent above. Panicle contracted, linear, 10–30 cm long, contracted about primary branches. Primary panicle branches appressed. Panicle axis angular, scaberulous. Panicle branches scabrous, glabrous in axils or pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, glabrous or ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2–3.3 mm long, 1.2 mm wide, falling entire, readily shedding fertile florets.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 1.5–1.7 mm long, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume primary vein scabrous. Upper glume lateral veins prominent. Upper glume surface pubescent, hairy above, inner surface pubescent. 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, 9 -veined, prominently veined, pubescent, hairy above, acute. Palea of lower sterile floret 2.5 mm long. Fertile lemma ovate, dorsally compressed, 2.4 mm long, 1 mm wide, indurate, yellow, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate. Palea surface papillose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Paraguay.

Panicum longivaginatum H. St. John. *Phytologia*, 63(5): 370 (1987).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hawaii: Hawaii I., Upper Waiakea Forest, *R. Gustafson 2400* (HT: BISH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. longus*, long; vagina, sheath; -ata, possessing. Leaf-sheaths long.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 50–70 cm long. Lateral branches lacking. Leaves cauline. Leaf-sheaths 5–11 cm long, glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 1–1.5 mm long. Leaf-blades lanceolate, 6–12 cm long, 10–13 mm wide, coriaceous, stiff. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, dense, 11–13 cm long. Primary panicle branches appressed. Panicle axis glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 2.8–3.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.3–1.2 mm long, 0.1–0.33 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 2.8–3.5 mm long, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 9 -veined, obtuse. Fertile lemma ovate, dorsally compressed, 2.2–2.8 mm long, indurate, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum lukwangulense Pilger. *Notizbl. Bot. Gart. Berlin*, xii. 380 (1935).

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

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Schleiben 3520*, 20 February 1933, Tanzania: Uluru Mts.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Lukwangula Plateau, Tanzania.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent. Culms 60–140 cm long. Leaves mostly basal. Leaf-sheaths wider than blade at the collar, pilose, with simple hairs or clavellate hairs. Ligule a ciliolate membrane. Leaf-blades lanceolate, 19–48 cm long, 7–16 mm wide, stiff. Leaf-blade surface pilose, sparsely hairy or moderately hairy or densely hairy, with tubercle-based hairs or clavellate hairs. Leaf-blade apex acute, hardened.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, (10–)15–30 cm long. Primary panicle branches ascending or spreading. Panicle branches capillary, pilose, with clavellate hairs. 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, 2.5–3.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 0.25–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex lobed. Upper glume oblong, 0.75–1 length of spikelet, membranous, purple, without keels, (3–)5 -veined. Upper glume apex lobed.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 7 -veined, pilose, hairy above (tip), lobed. Fertile lemma oblong, dorsally compressed, coriaceous, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, coriaceous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa. Tanzania. Malawi.

Panicum luridum Hack ex S. Eliot. *Journ. Linn. Soc.* xxix. 64. (1891).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *G.F. Scott Elliot 1745*, no date, Madagascar: near Antananarivo (US-80747 (fragm.)).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (335, Fig 125).

Derivation (Clifford & Bostock 2007): drab yellow. Lemmas or glumes brownish-yellow.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending or decumbent, 20–60 cm long. Lateral branches sparse. Leaves mostly basal. Ligule a ciliolate membrane. Leaf-blades linear or lanceolate, 3–6 cm long, 3–5 mm wide. Leaf-blade surface pilose, sparsely hairy. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 3–5 cm long. Primary panicle branches 1 -nate. Panicle branches scabrous. 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, dorsally compressed, obtuse, 2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma ovate, dorsally compressed, 2 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum luzonense J. & C. Presl. *Rel. Haenk.* i. 308. (1830).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960) (as *P. cambogiense*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Philippines. **Basionym or Replaced Name:** *Panicum cambogiense* Balansa, *Morot, Journ. de Bot*, 4: 142. (1890). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Philippine Islands: Luzon:, *Haenke s.n.* (HT: PR (fragm., LE)).

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (554 as *P. cambogiense*), C-C Hsu, *Taiwan Grasses* (1975) (as *P. cambogiense*), H. Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (101, Fig. 100), D. Sharp & B.K. Simon, *AusGrass. Grasses of Australia. CD-Rom Version 1.0.* (2002), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 713).

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

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 10–120 cm long, without nodal roots or rooting from lower nodes. Culm-nodes pubescent. Leaf-sheaths without keel, hispid, with tubercle-based hairs, outer margin hairy. Ligule a fringe of hairs, 1.5–2 mm long. Collar pubescent. Leaf-blades linear or lanceolate, 18–25 cm long, 6–15 mm wide. Leaf-blade surface glabrous to hirsute, hairy on both sides. Leaf-blade margins smooth or scaberulous, tuberculate-ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–50 cm long. Primary panicle branches ascending or spreading. Panicle branches smooth or scaberulous, with scattered hairs or glabrous, glabrous in axils or pubescent 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 elliptic or oblong, dorsally compressed, 1.5–2.6 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.5–1.1 mm long, 0.33–0.5 length of spikelet, membranous, without keels, 3–9 -veined. Lower glume apex obtuse or acute. Upper glume ovate, 1.3–1.8 mm long, 0.8–1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1.5–2.6 mm long, 1 length of spikelet, membranous, 5–9 -veined, obtuse or acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.3–2.2 mm long, indurate, shiny, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, obovoid, 1.4 mm long.

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

Country /Province /State. China, Eastern Asia. China South Central, Hainan, China Southeast. Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** India, Sri Lanka. Andaman Is, Cambodia, Laos, Myanmar, Nicobar Is, Thailand, Vietnam. Java, Malaya, Singapore, Moluccas, Philippines. New Guinea West Papua (Irian Jaya). New Guinea, Solomon Is. **Australia.** Northern Territory. **Southwestern Pacific, Northwestern Pacific.** Caroline Is, Marianas.

TDWG4. Guangdong, Guangxi. Yunnan. Assam. Darwin & Gulf.

***Panicum machrisianum* Swallen.**

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Goiás: on sandstone rocky area, on wesy bank of stream, 14 km S of Veadeiros, region of the Chapada dos Veadeiros, 25 Apr 1956 HT: R.

Classification. Tribe: Paniceae. Subtribe PANICINAE .

Distribution (TDWG). Continent. South America.

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

***Panicum macrospermum* (Gould) A.Espejo & A.R.Lopez-Ferrari. *Acta Bot. Mex.*, 51: 62 (2000).**

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

TYPE from Mexico. **Basionym or Replaced Name:** *Dichantherium macrospermum* Gould, *Brittonia*, 32(3): 358 (1980). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mexico, San Luis Potosi: McGregor et al. 618 (US holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk *macros*, large; *sperma*, seed. Grains large.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms erect, 50–80 cm long, 4–6 -noded. Leaf-sheaths hispid, outer margin hairy. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades lanceolate, 7–15 cm long, 10–15 mm wide. Leaf-blade surface hispid, hairy on both sides.

Inflorescence. Inflorescence a panicle. Peduncle hispid above. Panicle open, ovate, effuse, 13–18 cm long, with spikelets clustered towards branch tips. Panicle axis hispid. Panicle branches capillary, hispid. Spikelets appressed, 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, dorsally compressed, 3.8–4.2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2–3 mm long, 0.5–0.7 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, puberulous. Fertile lemma elliptic, dorsally compressed, 3.8–4.2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Northeast Mexico.

***Panicum madipirens* Mez. *Engl.Jahrb.* lvii. 189 (1921).**

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

TYPE from Tanzania. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *Amani Inst. herb. n. 2582*, Africa: "Ostafrika" (K). ST: *Amani Inst. herb. n. 2583*, Africa: "Ostafrika" (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Madipir, East Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 25–120 cm long. Culm-internodes distally glabrous or hirsute. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades linear or lanceolate, 8–24 cm long, 6–12 mm wide, light green. Leaf-blade surface glabrous or pilose. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 10–20(–30) cm long. Panicle branches capillary. 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, acute, 2.5–3.7 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25 length of spikelet, membranous, without keels, 1–7 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -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, winged on margins (apically), 9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2.5–3.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface scaberulous, rough above (tip). Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa, Southern Africa. Kenya, Tanzania. Malawi, Mozambique, Zambia, Zimbabwe. Botswana.

***Panicum magnispicula* F.O. Zuloaga, O. Morrone & J.F.M. Valls. *Iheringia, Bot.*, 42: 5 (1993).**

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>: *vide* TROPICOS and Kew Synonymy Database: Brasil: Santa Catarina: Agua Doce (Campo gramíneo em encosta íngreme com afloramentos, 7.2 km ao sul da divisa Parana-Santa Catarina ao Longo da rodovia BR-153, 1160 m), 3 Dec 1987, Valls, Gomes & Silva 11521 (HT: CEN; IT: SI).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 259, Fig.24 (1996)), *Iheringia* (42: 11, Fig.9–17 (1992)).

Derivation (Clifford & Bostock 2007): L. magnus, large. Spikelets large for the genus.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 20–30 cm long. Culm-internodes terete, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, striately veined, hirsute, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades involute, 10–12 cm long, 2 mm wide. Leaf-blade surface hirsute, with tubercle-based hairs. Leaf-blade margins ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, comprising 7–12 fertile spikelets. Peduncle 25 cm long, glabrous. Panicle open, ovate, 3–6 cm long, 1 cm wide, bearing few spikelets. Primary panicle branches 3–4 in number, ascending, 1–3 cm long. Panicle branches scabrous, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, scabrous, 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, 5.5–5.8 mm long, 1.5–2 mm wide, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.5 mm long.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 3.5 mm long, 0.75 length of spikelet, membranous, without keels, 7–9 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume inner surface pubescent. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, mid-green or purple, 9 -veined, acuminate. Palea of lower sterile floret 2.5–2.8 mm long. Fertile lemma elliptic, dorsally compressed, 3.4–3.6 mm long, 1.5–1.7 mm wide, indurate, yellow, shiny, without keel, 7 -veined, more than 3-veined. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 2.2 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil South.

Panicum mahafalense A.Camus. *Bull. Soc. Bot. France*, lxxii. 620. (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar sud-ouest: dunes de Tsimanampetsotsa, cote Mahafaly, buissons de la brousse a Euohorbes, rare..." , *Perrier de la Bathie 11101* (HT: not designated).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (323, Fig 119).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Mahafaly coast, Madagascar.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 40–80 cm long. Culm-internodes elliptical in section, distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, truncate. Leaf-blades 15–40 cm long, 2–10 mm wide. Leaf-blade surface glabrous, hairless throughout or except near base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–25 cm long. Primary panicle branches ascending or spreading, 5–15 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, flexuous, 5–10 mm long.

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

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume orbicular, 0.24–0.33 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume surface pubescent. Lower glume apex obtuse, mucicous or mucronate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 5–7 -veined, pubescent, acute. Fertile lemma oblong, dorsally compressed, 2.5–3 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface rugose. Lemma margins convolute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum malacotrichum Steud. *Syn. Pl. Gram.* 418. (1854).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Boivin legit in Ins. Nossibë." [near Madagascar], *Boivin*.

Recent Synonyms: *Acroceras sambiranense* A.Camus, *Bull. Soc. Bot. France* 96: 166 (1950).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms robust. Lateral branches lacking. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a fringe of hairs. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 10–20 cm long, 10–25 mm wide. Leaf-blade surface glabrous or puberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–25 cm long, contracted about secondary branches. Primary panicle branches 1–2 -nate, 5–12 cm long. Panicle branches stiff, straight. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, obtuse, 2.5 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.5 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex obtuse. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, dorsally compressed, 2.5 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.3 mm long.

Distribution (TDWG). Continent. Africa.

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

Panicum mananarense A. Camus. *Not. Syst., Paris*, 15: 412 (1959).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Mananara R.: Humbert & Capuron 29168.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect or geniculately ascending, 1.5 mm diam., rooting from lower nodes. Culm-internodes smooth, distally glabrous. Lateral branches ample. Leaf-sheaths loose, striately veined, glabrous on surface. Ligule a ciliolate membrane. Leaf-blades linear or lanceolate, 20–25 cm long, 4–5 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins smooth or scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle 5–20 cm long. Panicle open, ovate, loose, 10–16 cm long, 2.5–3 cm wide. Primary panicle branches distant, 4–5 -nate, whorled at lower nodes, simple or sparsely divided. Panicle branches capillary, flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flexuous, unequal, 1.5–5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 2.5–2.8 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.7 mm long, 0.25–0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume surface tuberculate. Lower glume apex emarginate or obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume surface tuberculate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous. Fertile lemma elliptic, dorsally compressed, 2–2.2 mm long, indurate, without keel. Lemma surface punctate, rugulose. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

TDWG4.

Panicum mandrarense A. Camus. *Bull. Soc. Bot. France*, 99: 63 (1952).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Anadabolava: Humbert 12549.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 30–35 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blade base simple or broadly rounded or cordate. Leaf-blades 10–15 cm long, 5–6.5 mm wide. Leaf-blade surface pubescent or pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 4.5–6 cm long. Primary panicle branches appressed, 4–5 cm long. Panicle branches flexuous, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1–2 mm long, tip widened.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma, recurved at apex and gaping. Lower glume ovate, clasping, 0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate or ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 7 -veined, acute, mucronate. Fertile lemma elliptic, dorsally compressed, 1.6–1.7 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

TDWG4.

Panicum manongarivense A.Camus. *Bull. Soc. Bot. France*, lxxii. 707. (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar: massif de Manongarivo, au-dessous de 500 m, rocailles ombragees, gneiss, *Perrier de la Bathie 11.091* (HT: P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From the Manongarivo Massif, Madagascar.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent, weak, 15–20 cm long, rooting from lower nodes. Lateral branches ample. Leaf-sheaths glabrous on surface. Ligule absent. Leaf-blades lanceolate, 3.5–4 cm long, 6–7 mm wide, flaccid. Leaf-blade margins ciliate. Leaf-blade apex acute.

Inflorescence a panicle. Panicle open, elliptic, 3.5–6 cm long, 0.8–1 cm wide. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–2.5 mm long, ciliate, hairy at tip, with 2–2.5 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, subacute, 0.7–0.8 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume oblong, 0.7–0.8 mm long, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma oblong, dorsally compressed, 0.7–0.8 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum mapalense Pilger. *Notizbl. Bot. Gart. Berlin*, xv. 707 (1942).

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

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *H.J. Schlieben 998*, 21 May 1931, Tanzania: Songea Dist., Mapala (K; US-2207482).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Mapala forest, German East Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 45–150 cm long. Ligule a ciliate membrane. Leaf-blade base simple or broadly rounded. Leaf-blades lanceolate or ovate, 6–10 cm long, 15–25 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface smooth or scabrous, glabrous or pilose, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 15–30 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 0–1(–3) -veined. Lower glume lateral veins absent or obscure. Lower glume surface asperulous. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface asperulous. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, scaberulous, acute or acuminate. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Kenya, Tanzania, Uganda.

Panicum massaiense Stapf. *Mez, Bot. Jahrb. Engler* 34:144 (1904).

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

TYPE from Kenya. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Stuhlmann 4307*, Massai-Steppe ST: *Petreus s.n.*, Mossambik.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From the Massai steppe, Uganda.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, robust or of moderate stature or slender, 30–150 cm long. Lateral branches ample. Leaf-sheaths hispid. Ligule a ciliate membrane. Leaf-blades tapering towards sheath or parallel-sided, 10–25(–30) cm long, 3–8(–13) mm wide. Leaf-blade surface glabrous or hispid. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, (6–)10–20(–30) cm long. Panicle branches capillary, straight or flexuous. 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, 2.4–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 1(–5) -veined. Lower glume lateral veins absent or obscure. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 1.75 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa. Rwanda, Tanzania, Uganda. Malawi, Mozambique, Zambia.

Panicum merkeri Mez. *Engl. Jahrb.* iv. 144. (1904).

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

TYPE from Malawi. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *M. Merker s.n.*, 1902, Tanzania: Kilimanjaro (B; US-80785 (fragm.)). IST: *Whyte s.n.*, Südl. Nyassaland (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Merker Moritz (-1908) who collected in East Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect or geniculately ascending, robust, 100–175 cm long, (3–)4–6 mm diam. Culm-nodes glabrous or bearded. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades parallel-sided, 20–35 cm long, 7–15 mm wide. Leaf-blade surface hispid, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or oblong, 25–30 cm long. Primary panicle branches ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.25–0.33 length of spikelet, membranous, without keels, 1(–3) -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9(–11) -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, 9(–11) -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. DRC. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe.

Panicum miliaceum L. *Sp. Pl.* 58 (1753).

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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960), T.G.Tutin et al, *Flora Europaea* 5 (1980), N.Tsvelev, *Grasses of the Soviet Union* (1983), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: India (LINN-80.49). LT designated by Sherif & Siddiqi, *Fl. Libya* 145: 282 (1988).

Illustrations (Books): G.Hegi, *Flora von Mitteleuropa* 1 (1909), N.N.Tsvelev, *Grasses of the Soviet Union* (1983) (987 (653), Pl.15), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 401), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (309, Fig. 118), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (560), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl.799), H.J.Noltie, *The Grasses of Bhutan* (2000) (691, Fig. 38), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (464, Fig. 397), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (316), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (195, Fig. 30), 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) (458 as subsp. *miliaceum* & *ruderalis*), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (675, Fig. 143 & 701, Fig. 149), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (285, Fig.109), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (529, Fig. 357), B.Rosengurtt, *Gramineas Uruguayas I* (1970), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (23, Fig. 12), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 714), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:84(1980)).

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. -acea, resembling. Resembling *Milium*..

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 20–100 cm long. Culm-internodes distally glabrous or pubescent or hispid. Culm-nodes glabrous or pubescent or bearded. Leaf-sheaths hispid. Ligule a ciliate membrane, 1.5–3 mm long. Leaf-blades 10–20 cm long, 6–15(–20) mm wide. Leaf-blade surface glabrous or pubescent or hispid.

Inflorescence. Inflorescence a panicle. Panicle contracted, obovate, nodding, 5–10(–20) cm long. Panicle branches glabrous in axils, with insignificant pulvini. 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 ovate, dorsally compressed, compressed slightly, 4.5–5 mm long, persistent on plant.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–11 -veined. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–11 -veined, acute or acuminate. Fertile lemma oblong, dorsally compressed, 3–3.5 mm long, indurate, yellow or dark brown, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $N = 18$ (2 refs TROPICOS). $2n = 36$ (8 refs TROPICOS).

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

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

Country /Province /State. : Great Britain (*). : Austria, Czechoslovakia, Germany, Hungary, Poland, Switzerland. : Balears, France, Spain, Azores. : Albania, Bulgaria, Greece, Italy, Romania, Turkey Europe, Yugoslavia. Belarus, Estonia, Latvia, Lithuania, Baltic States, Central European Russia, East European Russia, North European Russia, South European Russia, Northwest European Russia, Moldova, Ukraine. **Northern Africa, Macaronesia, West-central tropical Africa, South tropical Africa, Southern Africa (*), Western Indian ocean.** Egypt, Libya. Madeira. Botswana, Limpopo, North-West, Gauteng, Lesotho. Mauritius (*), Madagascar (*). Siberia, Russian far east, **Middle Asia, Caucasus, Western Asia, Arabian Peninsula, China (+), Mongolia, Eastern Asia (+).** Altay, Buryatiya, Chita, Irkutsk, Tuva. Amur, Kuril Is, Primorye, Sakhalin. Kazakhstan, Turkmenistan, Tadjhikistan, Uzbekistan. Iran, Iraq. Gulf States, Oman. Japan, Nansei-Shoto, Taiwan. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Bangladesh, Eastern Himalaya, India, Pakistan, Sri Lanka, West Himalaya. Vietnam. Philippines. **Australia, New Zealand.** Western Australia (*), South Australia (*), Queensland (*), New South Wales (*), A.C.T. (*), Victoria (*), Tasmania (*). Chatham Is, New Zealand North I, New Zealand South I. **North-central Pacific.** New Caledonia. Hawaii (*). **Western Canada, Eastern Canada, Northeast USA, Southwestern USA, South-central USA, Southeastern USA.** Alberta, British Columbia, Manitoba, Saskatchewan. Nova Scotia, Ontario, Quebec. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Arizona, California, Nevada, Utah. New Mexico, Texas. Florida, Kentucky, Louisiana, North Carolina. **Mesoamerica, Caribbean, Northern South America, Brazil, Southern South America.** Honduras. Bahamas, Bermuda, Cuba, Haiti. French Guiana, Guyana. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Argentina Northeast, Uruguay.

TDWG4. Bhutan, Sikkim. Assam. Bihar. Maharashtra, Tamilnadu, Uttah Pradesh, West Bengal. Himachal Pradesh, Jammu Kashmir. South-West. Southern. Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains. La Rioja, Mendoza, Tucuman. Buenos Aires, Cordoba, Corrientes, Distrito Federal, Entre Rios, La Pampa, Santa Fe.

Panicum mindanaense Merrill. *Philipp. Journ. Sci. i. Suppl.* 360 (1906).

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), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *M.S. Clemens* 99, Jan 1906, Philippines: Mindanao I., Lanao del Sur prov. (US-709327; IT: B, PNH, US-850166, US-3414719 (ex NEB)).

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. *-ense*, denoting origin. From Mindanao, Philippines.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 20–80 cm long. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blades 5–15 cm long, 2–4 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 10–15 cm long, with spikelets clustered towards branch tips. Panicle branches scabrous. 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, dorsally compressed, 2–2.8 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 1 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acuminate. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 2–2.8 mm long, indurate, shiny, without keel, 5–7 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. **Malesia, Papuasia.** Lesser Sunda Is, Philippines. New Guinea West Papua (Irian Jaya). New Guinea. **Australia.** Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley, Eremean. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. North, Central.

Panicum mitchellii Benth. Fl. Amstral. vii. 489. (1878).

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: ST: *P.A. O'Shanesy s.n.*, 1876, Australia: Queensland: Rockhampton (L). ST: *J. Dallachy s.n.*, 1868, Australia: Queensland: Rockingham Bay (L).

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): in honor of Thomas Livingstone Mitchell (1792–1855) Scots- born Australian surveyor and explorer.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Cataphylls evident. Culms erect, 100–200 cm long, 4–8 -noded. Culm-nodes glabrous. Leaf-sheaths antrorsely scabrous, glabrous on surface or pilose, outer margin glabrous or hairy. Ligule a ciliate membrane, 0.8–1.5 mm long. Leaf-blades 10–50 cm long, 6–14 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–40 cm long. Primary panicle branches spreading, 12–30 cm long, bearing 40–200 fertile spikelets on each lower branch. Panicle axis scabrous. Panicle branches scabrous, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–10 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.5–3 mm long, 0.9–1.1 mm wide, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.15–0.25 mm long.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.2–1.6 mm long, 0.5–0.6 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex obtuse or acute, mucous or mucronate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, acute, mucous or mucronate. Fertile lemma elliptic, dorsally compressed, 2–2.5 mm long, indurate, without keel. Lemma lateral veins obscure. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.3–1.6 mm long. Caryopsis with adherent pericarp.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Queensland.

TDWG4. North, Central, South East.

Panicum mitopus K. Schum. *Engl. Pflanzenw. Ost-Afr. C* 103. (1895).

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

TYPE from Tanzania. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Holst 514b*, Tanzania: Usagara-Usambaba (K).

Recent Synonyms: *Panicum uvulatum* Stapf, *Bull. Misc. Inform. Kew* 1919 (6–7): 265 (1919)

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. mitos, thread; pous, foot. Pedicels thread-like.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms rambling, slender, 25–60 cm long. Ligule a ciliate membrane. Leaf-blades lanceolate, tapering towards sheath, 3–7 cm long, 5–10 mm wide, membranous. Leaf-blade surface glabrous or pilose. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 10–20 cm long, with spikelets clustered towards branch tips (in groups of 10–60 spikelets). Primary panicle branches spreading, sparsely divided, branching dichotomously. 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 oblanceolate or elliptic, dorsally compressed, acute, 1.3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, yellow, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3–5 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, Western Indian ocean. Tanzania. Madagascar.

Panicum mlahiense S.A. Renvoize. *Kew Bull.*, 34(3): 554 (1979).

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

TYPE from Tanzania. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Vollesen MRC 4563*, 5 May 1977, Tanzania: Ulanga District: Mlahi, Kilombero River, 8°17'S, 37°05'E (K; IT: C).

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms slender, 30–65 cm long. Ligule a ciliate membrane. Leaf-blades parallel-sided, 8–14 cm long, 3–9 mm wide, membranous. Leaf-blade surface glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 14–18 cm long, contracted about primary branches. Primary panicle branches spreading or reflexed. 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, acute, 2.2–2.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.25–0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa. Tanzania. Zambia.

Panicum mohavense J.R. Reeder. *Phytologia*, 71(4): 300 (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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: J.R. Reeder & C.G. Reeder 8630, 11 Oct 1990, USA: Arizona: Mohave Co. (ARIZ; IT: US-3238288).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (463).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Mohave County, Arizona, USA.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms 2–6(–8) cm long, 1 -noded. Culm-internodes distally pilose, with tubercle-based hairs. Lateral branches ample, arising from lower culm. Leaf-sheaths striately veined, pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.2 mm long. Leaf-blades 1–4 cm long, (1–)2–3 mm wide. Leaf-blade surface glabrous or pilose, hairy abaxially, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence a panicle, shorter than basal leaves, embraced at base by subtending leaf. Panicle open, oblong, dense, 1–2 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.33 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, yellow or light brown, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

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

Distribution (TDWG). Continent. North America.

Country /Province /State. Southwestern USA, South-central USA. Arizona. New Mexico.

Panicum monticola Hook. f. *Journ. Linn. Soc.* vii. 226. (1864).

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

TYPE from Cameroon Mt. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Mann 1353*, Cameroun: Cameroon Mountain (K).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (208, Fig 86).

Derivation (Clifford & Bostock 2007): L. *mons*, mountain; *-cola*, dweller. Growing on mountains.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent, slender, 30–100 cm long. Ligule a ciliate membrane. Leaf-blades spreading, lanceolate or ovate, tapering towards sheath, (3–)7–15 cm long, 5–25 mm wide, membranous. Leaf-blade venation without cross veins or with distinct cross veins. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, oblong or ovate, (5–)10–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, dorsally compressed, acuminate, 2.2–3.5(–4) mm long, falling entire.

Glumes. Glumes similar or dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.5(–0.66) length of spikelet, hyaline or membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous or pubescent or pilose. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or pubescent or pilose. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, glabrous or pubescent or pilose, acute or acuminate. Fertile lemma oblong, dorsally compressed, 2.5–3.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long.

N = 19 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Cameroon, Annobon, Principe & Sao Tome, Bioko, Rwanda, DRC. Ethiopia (inc. Eritrea). Kenya, Tanzania, Uganda. Limpopo.

Panicum morombense A. Camus. *Not. Syst., Paris*, 15: 412 (1959).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Marombe: Decary 8765.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 25–35 cm long. Lateral branches ample. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined. Ligule a ciliolate membrane. Leaf-blades lanceolate, 7–9 cm long, 4–6 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–16 cm long, 3–6 cm wide. Primary panicle branches distant. Panicle branches sinuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flexuous, 2–12 mm long.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.6–0.7 mm long, 0.5–0.6 length of spikelet, membranous, without keels. Upper glume ovate, 1 length of spikelet, membranous, 1-keeled. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous. Fertile lemma ovate, dorsally compressed, 1.2–1.4 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum mucronulatum Mez. *Engl. Jahrb. Ivi. Beibl.* 125, 2 (1921).

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: ST: *G. Gardner 208*, no date, Brazil: Bahai (B, US-80776 (fragm. ex BM)). ST: *J. Blanchet 2961*, no date, Brazil: Bahia (US-1445114 (fragm. ex P)). LT: *Blanchet 104*, Brazil: Bahia (B, US-80776 (fragm. ex B)). LT designated by Zuloaga & Morrone, *Ann. Missouri Bot. Gard.* 1996.

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (163, Fig. 59).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 261, Fig.25 (1996)).

Derivation (Clifford & Bostock 2007): *L. mucronulus*, small hook. -atus, possessing. Lemma shortly aristate.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–90 cm long. Leaf-sheaths hispid. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades 25–60 cm long, 5–15 mm wide. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or obovate, 30–40 cm long. Primary panicle branches profusely divided. 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, dorsally compressed, acute or acuminate, 3–3.8 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.33 length of spikelet, membranous, without keels, 7 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9(–13) -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma elliptic, dorsally compressed, 3–3.8 mm long, indurate, pallid, 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.
TDWG4. Bahia, Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe.

Panicum muscicola A. Camus. *Bull. Soc. Bot. France*, 94: 40 (1947).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Ambre: Perrier 19300.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent, 50–60 cm long, rooting from lower nodes. Culm-internodes striate, distally glabrous. Lateral branches ample. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, puberulous, outer margin hairy. Ligule an eciliate membrane. Leaf-blades lanceolate, 7–10 cm long, 15–20 mm wide. Leaf-blade venation with 8–10 secondary veins, with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade margins cartilaginous, scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 18–20 cm long, 13–14 cm wide. Primary panicle branches spreading, 1-nate. Panicle branches straight. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, straight, 8–10 mm long, glabrous.

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

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.75 mm long, 0.5 length of spikelet, membranous, without keels, 3-veined. Lower glume surface puberulous. Upper glume lanceolate, 0.75 mm long, 0.5 length of spikelet, membranous, without keels, 3-veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous. Fertile lemma ovate, dorsally compressed, 1.5 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum mystasipum F.O. Zuloaga & O. Morrone. *Iheringia, Bot.*, 42: 14 (1993).

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: Brasil: Distrito Federal: campo cerrado perturbado ao longo da rodovia BR-020 entre Sobradinho e o Centro de Pesquisas Agropecuarias do Cerrado (CPAC/EMBRAPA), 28 Nov 1988, *Valls, Faraco & Zuloaga 11951* (HT: CEN; IT: SI).

Illustrations (Journals): *Iheringia* (42: 21, Fig.1–8 (1992)).

Derivation (Clifford & Bostock 2007): Gk *mystax*, hair on upper lip; *sipue*, case. Base of lemma subtending the grain invested with long hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect, 45–106 cm long. Culm-internodes terete, striate, distally glabrous. Culm-nodes glabrous. Leaf-sheaths 6–14 cm long, longer than adjacent culm internode, hirsute, outer margin hairy. Ligule a ciliate membrane, 0.8–1.2 mm long. Leaf-blades involute, 20–45 cm long, 3–5 mm wide, stiff. Leaf-blade surface scaberulous, rough abaxially, pilose, sparsely hairy, hairy adaxially. Leaf-blade margins scabrous, ciliate, hairy at base. Leaf-blade apex attenuate, mucous or pungent.

Inflorescence. Inflorescence a panicle, comprising 10–20 fertile spikelets. Peduncle 30–70 cm long, glabrous. Panicle open, ovate, 9–20 cm long, 1–6 cm wide, bearing few spikelets. Primary panicle branches appressed or ascending, simple, 6–12 cm long. Panicle axis scabrous, glabrous or hispid. Panicle branches glabrous in axils or bearded in axils. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 7.2–9.2 mm long, 2–2.4 mm wide, falling entire. Spikelet callus square, 0.5 mm long. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 4.5–5.8 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 7–9 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume ovate, 6.8–8 mm long, 1 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume primary vein scabrous. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 6–7.2 mm long, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 4.8–5.2 mm long, pilose, adorned on flanks. Fertile lemma elliptic, dorsally compressed, 4.8 mm long, 1.6 mm wide, indurate, yellow or black, suffused with last colour, without keel, 7 -veined, more than 3-veined. Lemma margins involute, ciliate, hairy at base. Palea involute, indurate.

Flower and Fruit. Anthers 3, 3 mm long. Caryopsis with adherent pericarp, ellipsoid, 3.5 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Panicum nehruese Jauhar & Joshi. *Bull. Bot. Surv. India* 8: 97 (1966).

TYPE from India?. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Cult. at New Delhi, seed from Australia: Jauhar 9.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. In honour of Shri Jawaharlal Nehru whose ashes are incorporated in Indian soil.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Rajasthan.

Panicum neobathiei A. Camus. *Bull. Soc. Bot. France*, 74: 634 (1928).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Mt Tsaratanana: Perrier 16369.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, slender, 12–17 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths striately veined, glabrous on surface or pilose. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, 1–1.5 cm long, 2–2.5 mm wide, stiff. Leaf-blade surface pilose. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 1.2–2 cm long, 0.5–0.8 cm wide. Primary panicle branches appressed, 0.3–0.5 cm long. Panicle branches flexuous, pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–3(–5) mm long, ciliate, with 2.5–3 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or oblong, dorsally compressed, acute, 1.3–1.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels. Lower glume apex entire or erose, acute. Upper glume lanceolate, 1.3–1.5 mm long, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface rugose, rough above. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1.3–1.5 mm long, 1 length of spikelet, membranous, 5–7 -veined, rugose, rough above, acute. Fertile lemma lanceolate, dorsally compressed, 1.2–1.4 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum neohumbertii A. Camus. *Bull. Soc. Bot. France*, 74: 633 (1928).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Boforona: Humbert 2255.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending. Culm-internodes 3–5 cm long. Lateral branches ample. Leaf-sheaths 3–4 cm long, striately veined, hirsute. Ligule a ciliolate membrane. Leaf-blades lanceolate, 7–8 cm long, 15–20 mm wide. Leaf-blade surface hirsute. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, lanceolate. Primary panicle branches 4–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–2 mm long, 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 lanceolate or oblong, dorsally compressed, acute, 1.2–1.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.4–0.5 mm long, 0.33 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 1.2–1.5 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose, hairy at apex. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1.2–1.5 mm long, 1 length of spikelet, membranous, 5 -veined, pilose, hairy at apex, acute. Fertile lemma lanceolate, dorsally compressed, 1.2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum neoperrieri A.Camus. *Bull. Bot. Soc. France*, lxxiii. 976 (1927).

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

TYPE from Madagascar. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: J.M.H.A. Perrier de la Bathie 14538, no date, Madagascar: massif d' Andringitra (P; IT: US-1298204 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 300–400 cm long. Culm-internodes distally glabrous. Lateral branches ample. Leaf-sheaths striately veined, puberulous. Ligule a ciliate membrane. Leaf-blades lanceolate, 9–11 cm long, 8–15 mm wide, stiff. Leaf-blade surface puberulous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, effuse, 15 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 10–30 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular, dorsally compressed, 2.8–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2.8–3 mm long, 1 length of spikelet, membranous, without keels, 9–11 -veined. Lower glume lateral veins prominent. Lower glume surface woolly, hairy at apex. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume lateral veins prominent. Upper glume surface woolly, hairy at apex. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, woolly, hairy at apex, obtuse. Palea of lower sterile floret 2.5–2.6 mm long, pubescent. Fertile lemma ovate, dorsally compressed, 2.7 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum nephelophilum Gaudich. *Frey. Voy. Bot.* 411. (1830).

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

TYPE from Hawaii. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: T: C. Gaudichaud-Beaupre s.n., 1825, Hawaii (US-80873 (fragm.)).

Illustrations (Books): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1564, Pl. 232).

Derivation (Clifford & Bostock 2007): Gk. nephele, cloud; phileo, love. Growing in the clouds, that is a mountain species.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 45–240 cm long. Culm-internodes distally glabrous or pubescent or pilose, with tubercle-based hairs. Culm-nodes glabrous or bearded. Lateral branches lacking. Leaves cauline. Leaf-sheaths pubescent or pilose, with tubercle-based hairs. Ligule a ciliate membrane, 1.1–4.9 mm long. Leaf-blades 10–40 cm long, 8–25 mm wide. Leaf-blade surface glabrous to pilose, sparsely hairy or moderately hairy or densely hairy.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or ovate, 15–60 cm long. Primary panicle branches ascending or spreading, whorled at lower nodes. Panicle branches scabrous, pubescent 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 lanceolate, dorsally compressed, acuminate, 1.8–3.4 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acute or acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 0.33–0.5 length of lemma. Fertile lemma lanceolate or elliptic, dorsally compressed, 1.5–2 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.9–1.5 mm long, purple. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum nigerense Hitchcock. *Proc. Biol. Soc. Wash.* xliii. 90. (1930).

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

TYPE from Niger. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *O. Hagerup* 481, 9 Oct 1927, Niger: Niamey (US-1445575; IT: US-1718616).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Republic of Niger, western Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms robust, 80–100 cm long. Ligule a ciliate membrane. Leaf-blades 5–40 cm long, 4–10 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, obovate, 15–30 cm long. Primary panicle branches whorled at lower nodes, 10–20 cm long. Panicle branches stiff, scabrous. 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 lanceolate, dorsally compressed, acuminate, 5–6 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, recurved at apex. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acuminate. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma oblong, dorsally compressed, 4–5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Burkina, Mali, Nigeria, Niger.

Panicum nigromarginatum Robyns. *Mem. Inst. Col. Belge, 4to, Sect. Sc. Nat. & Med. i. Fasc.6 reimpr.* p. 24 (1932).

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

TYPE from DRC. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *J.C.C. Bequaert* 385, 2 May 1912, Zaire: Shaba: Welgelege (BR; IT: K, US-1538733 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, weak, 30–55 cm long. Leaf-sheaths as wide as blade at the collar or narrower than blade at the collar. Ligule a ciliate membrane. Leaf-blades spreading or reflexed, lanceolate, 1.5–3.5(–4.5) cm long, 1–4 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade margins glabrous or ciliate (clavellately). Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 1–6 cm long, contracted about primary branches. Primary panicle branches bearing spikelets almost to the base. Panicle branches pilose, with clavellate hairs. 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, 1.2–1.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, obtuse. Fertile lemma oblong, dorsally compressed, 1.2–1.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa. DRC. Uganda. Zambia.

Panicum niihauense St. John. *Occas. Papers Bishop Mus.*, Honolulu, 9: No. 14, 5 (1931).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.F.G. Stokes s.n.*, Jan 1912, Hawaii: Kauai I.: Kauai Co. (BISH; IT: US-1535752, US-80877 (fragm. ex BISH)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Niihau, one of the Hawaiian Islands.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–125 cm long. Culm-internodes distally pubescent. Culm-nodes pubescent. Lateral branches lacking. Leaves cauline. Leaf-sheaths puberulous or hispid. Ligule a ciliate membrane, 1.4–3.2 mm long. Leaf-blades 15–35 cm long, 7–19 mm wide. Leaf-blade surface pubescent, densely hairy.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 13–35 cm long, contracted about primary branches. Primary panicle branches appressed. Panicle axis puberulous. Panicle branches scaberulous. 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, dorsally compressed, acuminate, 2.6–3.2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.9–1 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 0.2–0.25 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.2–1.5 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.9–1.2 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum nodatum Hitchcock & Chase. *Contrib. U. S. Nat. Herb.* xv. 293 (1910).

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

TYPE from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 3865, 7 Aug 1904, USA: Texas: Kenedy Co.: Sarita (US-592749).

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (562).

Derivation (Clifford & Bostock 2007): *L. nodus*, knot; *-atum*, possessing. Lateral culms with numerous swollen nodes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms decumbent, 20–50(–65) cm long, wiry. Culm-internodes papillose, distally pubescent. Culm-nodes swollen. Lateral branches ample, arising from mid culm and upper culm. Leaves all alike. Leaf-sheaths mostly shorter than adjacent culm internode, hispid, with tubercle-based hairs. Ligule a fringe of hairs, 1 mm long. Leaf-blade base broadly rounded. Leaf-blades ascending, lanceolate, 3–9 cm long, 3–9 mm wide. Leaf-blade surface puberulous, hairy on both sides. Leaf-blade margins tuberculate-ciliate, hairy at base. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, ovate, 4–13 cm long, 2–3 cm wide, bearing few spikelets. Primary panicle branches ascending, branching divaricately. Spikelets appressed, 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 obovate, with attenuate base, dorsally compressed, 3.5–4.3 mm long, 1.7 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.5–2 mm long, 0.33 length of spikelet, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface pubescent. Lower glume apex acuminate. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, acute. Fertile lemma elliptic, dorsally compressed, 3 mm long, 1.4 mm wide, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

Distribution (TDWG), Continent. North America.

Country /Province /State. South-central USA and Mexico. Texas. Northwest Mexico.

Panicum notatum Retz. *Obs.* iv. 18 (1786).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (as *P. montanum*).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Indonesia: Sumatra:, *D. Wennerberg s.n.* (HT: LD).

Illustrations (Books): C-C Hsu, *Taiwan Grasses* (1975), K.M.Mathew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (Pl. 801), H.J.Noltie, *The Grasses of Bhutan* (2000) (691, Fig. 38).

Derivation (Clifford & Bostock 2007): *L. noto*, mark. Spikelets multi-colored.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent or rambling, 8–200 cm long, rooting from lower nodes. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths without keel, glabrous on surface or pubescent, outer margin hairy. Ligule a ciliolate membrane, 0.2–0.4 mm long. Collar glabrous. Leaf-blade base cordate. Leaf-blades lanceolate, 6–15 cm long, 10–27 mm wide. Leaf-blade surface glabrous or puberulous or hirsute, sparsely hairy. Leaf-blade margins scabrous, ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–40 cm long. Primary panicle branches spreading. Panicle branches smooth or scabrous, glabrous in axils or 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 elliptic, dorsally compressed, subacute or acute, 2.2–2.7 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Lower glume surface glabrous or pubescent. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface glabrous or pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma elliptic, dorsally

compressed, 1.7–2.1 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse or acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.6–1.9 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.5–1.6 mm long.

N = 18 (1 ref TROPICOS), or 36 (1 ref TROPICOS).

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

Country /Province /State. **China, Eastern Asia.** China South Central, China Southeast, Tibet. Taiwan. **Indian Subcontinent, Indo-China, Malesia.** Eastern Himalaya, India, Nepal, Sri Lanka. Laos, Myanmar, Thailand, Vietnam. Borneo, Java, Lesser Sunda Is, Malaya, Philippines.

TDWG4. Fujian, Guangdong, Guangxi. Yunnan. Darjeeling, Bhutan, Sikkim.

Panicum novemnerve Stapf. *Prain, Fl. Trop. Afr.* ix. 702 (1920).

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 Zimbabwe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Allen 692*, "Mozambique Distr. Rhodesia: Mashonaland; Salisbury, ..." ST: *Mrs. Craster 27*, "Mozambique Distr. Rhodesia: Mashonaland; Salisbury, ..." ST: *Mundy*, "N. Mazoe District, ..." ST: *Appleton 6*, "Buluwayo and Matoppo Hills".

Illustrations (Books): M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (331, Fig 123), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (195, Fig. 30).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *L. novem*, nine; *nervus*, nerve. Upper glume and sterile lemma each nine-nerved.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms 30–60 cm long. Culm-internodes distally hirsute. Lateral branches sparse. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, 6–20 cm long, 6–12 mm wide. Leaf-blade surface hirsute, with tubercle-based hairs. Leaf-blade apex acuminate or attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–20 cm long. Primary panicle branches ascending or spreading. Panicle branches flexuous. 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, 2.2–2.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG), Continent. Europe (*), Africa, Australasia (*).

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **South tropical Africa, Southern Africa, Western Indian ocean.** Namibia, Botswana, Limpopo, Kwazulu-Natal, Western Cape. Madagascar. **Australia.** Queensland (*).

TDWG4. South East.

Panicum nudiflorum S.A. Renvoize. *Kew Bull.*, 34(3): 552 (1979).

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

TYPE from Kenya. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Greenway & Kanuri 12674*, Kenya: Lake Kandere (Kandiri) (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. nudus*, bare; flos, flower. Upper floret lacking a palea.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, slender, 60–80 cm long, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades linear or

lanceolate, 10–18 cm long, 7–10 mm wide, dark green. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal or ovate, 25–40 cm long. Primary panicle branches appressed or ascending. 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, acute, (1.5–)2 mm long, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.25 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 1.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface reticulate. Lemma margins involute. Lemma apex apiculate, with a little green crest. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Kenya, Tanzania.

Panicum nymphoides S.A. Renvoize. *Kew Bull.*, 44(3): 545 (1989).

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

TYPE from Malawi. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Malawi: Mt. Mulanje, 4 Feb 1971, *Hilliard & Burt* 6396 (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. Nymphe, a goddess presiding over localities including rocky places; -oides, indicating resemblance. Growing in the shelter of boulders.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, slender, 9–10 cm long. Ligule a ciliate membrane. Leaf-blades lanceolate, 0.5–1.5 cm long, 1–3 mm wide, flaccid. Leaf-blade apex acute.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 2–3 fertile spikelets. 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, 2 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface pilose. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pilose. Upper glume apex acute.

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

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Malawi.

Panicum obseptum Trin. *Gram. Pan.* :149 (1826).

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).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Port Jackson: Woolls (CGE holotype).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (589, Fig 119), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (317), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (195, Fig. 30), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. obsaepio, enclose. Inflorescence enclosed in leaf-sheath.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Basal innovations extravaginal. Culms decumbent, weak, 15–30 cm long, compressible, 6–7 -noded, rooting from lower nodes. Culm-nodes pubescent. Lateral branches

sparse. Leaf-sheaths mostly shorter than adjacent culm internode or longer than adjacent culm internode, glabrous on surface or pubescent. Ligule a ciliate membrane, 0.5–0.75 mm long. Leaf-blades 1–10 cm long, 1.25–4 mm wide, membranous. Leaf-blade midrib indistinct. Leaf-blade surface glabrous or pubescent, sparsely hairy. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, lanceolate, 2–3 cm long. Primary panicle branches simple or sparsely divided. Panicle branches smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–3 mm long, smooth, tip discoid.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, subacute, 2.75–3.25 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.25 length of spikelet, membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex obtuse.

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

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Queensland, New South Wales, Victoria.

TDWG4. South East. Coast, Tablelands.

Panicum oligoadenotrichum A. Camus. *Bull. Soc. Bot. France*, 108: 160 (1961).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Ankarana: Humbert.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, slender, 50–70 cm long. Culm-internodes distally glabrous. Culm-nodes pubescent. Lateral branches ample. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, puberulous. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 6–11 cm long, 8–10 mm wide. Leaf-blade venation prominent, with 4–6 secondary veins, with obscure cross veins. Leaf-blade surface glabrous or puberulous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, effuse, 12–15 cm long, 7–10 cm wide. Primary panicle branches spreading, 1 -nate, 4–5 cm long. Panicle branches pilose, with capitate hairs. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.1–4 mm long, bearing a few hairs.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 1.4–1.5 mm long, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous. Fertile lemma lanceolate or oblong, dorsally compressed, 1.2–1.4 mm long, indurate, pallid, without keel. Lemma surface granulose. Lemma margins involute. Lemma apex mucronate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. **Western Indian ocean.** Madagascar.

Panicum olyroides H. B. & K. *Nov. Gen. et Sp.* i. 102. (1815).

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: HT: F.W.H.A. von Humboldt & A.J.A. Bonpland s.n., Sep, Venezuela: montis Impossible (P; IT: B, BAA-1905 (fragm. ex B), US-974661 (fragm. ex P-BONPL & photo)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (405, Fig. 86), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (204, Fig. 158), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (703, Fig. 150), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (263, Fig. 74).

Illustrations (Journals): *Darwiniana* (22: 28, Fig.7 (1979)).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to *Olyra*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 50–100 cm long. Leaf-sheaths as wide as blade at the collar, glabrous on surface or pilose. Leaf-sheath auricles absent or erect. Ligule a ciliate membrane. Leaf-blades erect, 20–80 cm long, 2–10(–18) mm wide, stiff. Leaf-blade surface glabrous or pilose. Leaf-blade apex attenuate, pungent.

Inflorescence. Inflorescence a panicle, deciduous as a whole. Peduncle fracturing. Panicle open, ovate or globose, effuse, 20–40 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 15–40 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, rostrate, 6–7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 7 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 4 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma surface pilose, hairy below, with clavate hairs. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 36$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil, Southern South America. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay.

TDWG4. Mato Grosso, Goias, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Corrientes, Misiones.

Panicum omega S.A. Renvoize. *Kew Bull.*, 34(3): 551 (1980).

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: *Wingfield* 512, 25 Dec 1969, Tanzania: Mbeya District, World's End View (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): final letter of Greek alphabet. From World's End View, Mbeya-Chunya, Tanzania.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pilose, persistent and investing base of culm, with fibrous dead sheaths. Culms slender, 17–27 cm long. Leaves mostly basal. Leaf-sheaths as wide as blade at the collar, pilose, with simple hairs or clavellate hairs. Ligule a ciliolate membrane. Leaf-blades lanceolate, 3–7 cm long, 2–3 mm wide. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 2.5–3.5 cm long. Panicle branches glabrous. 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, 1.5–2 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 0.5–0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex lobed. Upper glume oblong, 1 length of spikelet, membranous, purple, without keels, 5 -veined. Upper glume apex lobed.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 7 -veined, pilose, hairy above (tip), lobed. Fertile lemma oblong, dorsally compressed, coriaceous, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, coriaceous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa. Tanzania.

Panicum paianum V.N. Naik & B.W. Patunkar. *Reinwardtia*, 9(4): 407 (31 March] (1980).

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

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Rajgarh (Rajasthan): Patunkar 2430 (MU holo, K).

Illustrations (Journals): *Reinwardtia* (9: 408, fig.3 (1980)).

Derivation (Clifford & Bostock 2007): L. - *anum*, indicating connection. In honor of Raghvendra Mukund Pai (1932-) Indian botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 15–50 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface or puberulous, with tubercle-based hairs. Ligule a fringe of hairs, 1 mm long. Leaf-blades linear or lanceolate, 3–10 cm long, 5–9 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, effuse, 6–15 cm long, 6–10 cm wide. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, tip oblique.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acute, 2.7–3.2 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume oblate, clasping, 1 mm long, 0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex obtuse. Upper glume ovate, 2.5–3 mm long, 1 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma oblong or ovate, dorsally compressed, 1.8–2 mm long, indurate, pruinose, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma surface smooth. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India. Rajasthan.

Panicum palackyanum A. Camus. *Bull. Soc. Bot. France*, 77: 638 (1931).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Andringitra: Perrier 13748.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms prostrate. Culm-internodes distally glabrous. Lateral branches ample. Leaf-sheaths loose, striately veined, glabrous on surface. Ligule an eciliate membrane, truncate. Leaf-blades spreading, lanceolate, 4.5–8 cm long, 4–5 mm wide. Leaf-blade venation with 6–8 secondary veins. Leaf-blade surface glabrous. Leaf-blade margins scaberrulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, loose, 10–12 cm long. Primary panicle branches 3–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–5 mm long, glabrous.

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

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 0.8 mm long, 0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex obtuse. Upper glume ovate, 2 mm long, 0.75 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, hairy at apex. Upper glume apex truncate or obtuse.

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, pubescent, hairy at apex, obtuse. Fertile lemma elliptic or oblong, dorsally compressed, 2 mm long or 4 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum palauense Ohwi. *Bot. Mag., Tokyo*, lv. 544 (1941).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Palau. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Palau, *R. Kanehira & S. Hatusima 4351*.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Palau, Caroline Islands, Micronesia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 30–40 cm long, 3–5 -noded. Culm-nodes pubescent. Leaf-sheaths mostly shorter than adjacent culm internode, hispid, with tubercle-based hairs. Ligule a fringe of hairs, 1 mm long. Leaf-blades 10–15 cm long, 2–4 mm wide. Leaf-blade surface smooth, pubescent or pilose, hairy on both sides. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 10–15 cm long. Primary panicle branches spreading, bearing 4–6 fertile spikelets on each lower branch. Panicle branches scaberulous, glabrous, glabrous in axils or pubescent 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, acuminate, 2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 1 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 2 mm long, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 2 mm long, 1 length of spikelet, membranous, acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Northwestern Pacific. Caroline Is.

Panicum paludosum Roxb. *Fl. Ind.* 1:310 (1820).

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), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India:, *Roxburgh 806* (HT: BM; IT: CAL, K(icon. ined. 806)) 'It grows generally in sweet water amongst the Circar mountains.'

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (304, Fig. 116), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (564), C-C Hsu, *Taiwan Grasses* (1975), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl. 802 & Pl. 803), H.J.Noltie, *The Grasses of Bhutan* (2000), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (101, Fig. 102), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (198, Fig. 31), 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) (471).

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

Derivation (Clifford & Bostock 2007): L. palus, swamp; -osa, abundance. Growing in swampy places.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 25–130 cm long, spongy, rooting from lower nodes. Culm-nodes glabrous. Leaf-sheaths loose, glabrous on surface. Ligule a

fringe of hairs. Leaf-blade base broadly rounded or cordate. Leaf-blades linear or lanceolate, flat, 15–30 cm long, 6–14 mm wide. Leaf-blade apex abruptly acute or acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 10–30 cm long. Primary panicle branches whorled at lower nodes, 1–10 cm long. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 2–8 mm long, scaberulous.

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, 3.2–4 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume orbicular, 1 mm long, 0.1–0.25 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume lanceolate or ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate or ovate, 1 length of spikelet, membranous, 9 -veined, acute or acuminate. Palea of lower sterile floret 0–0.66 length of lemma. Fertile lemma oblong or ovate, dorsally compressed, 2.25 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1 mm long, red. Caryopsis with adherent pericarp, oblong, 1.5 mm long. $N = 9$ (1 ref TROPICOS), or 17 (1 ref TROPICOS), or 27 (4 refs TROPICOS).

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

Country /Province /State. Western Asia, China, Eastern Asia. Iran. Nansei-Shoto, Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Bangladesh, Eastern Himalaya, India, Pakistan, Sri Lanka. Myanmar, Thailand, Vietnam. Java, Sumatra, Sulawesi, Malaya, Philippines, Singapore. New Guinea West Papua (Irian Jaya). New Guinea. **Australia.** Northern Territory, Queensland, New South Wales. **Southwestern Pacific.** New Caledonia, Vanuatu.

TDWG4. Bhutan, Sikkim. Assam, Manipur, Meghalaya. Bihar, Delhi, Goa, Gujarat, Haryana, Kerala. Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamilnadu, Uttah Pradesh. Darwin & Gulf, Victoria R & Barkly Tableland. North, Central, South East. Coast.

Panicum pampinosum Hitchcock & Chase. *Contrib. U. S. Nat. Herb.* xv. 66 (1910).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.J. Thorne* 193, 25 Aug 1903, USA: Arizona: Wilmot, on range reserve (US-592754; IT: MO-2752215, TEX).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (317).

Derivation (Clifford & Bostock 2007): *L. pampinosa*, leafy. Plants freely branching from the base.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending. Culm-internodes elliptical in section, distally glabrous. Culm-nodes pubescent. Lateral branches ample, arising from lower culm and mid culm. Leaf-sheaths hispid, with tubercle-based hairs, outer margin hairy. Ligule a fringe of hairs, 2–3 mm long. Leaf-blade base broadly rounded or cordate. Leaf-blades 5–12 cm long, 5–10 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides. Leaf-blade margins undulate, ciliate.

Inflorescence. Inflorescence a panicle. Peduncle glabrous or pubescent above. Panicle open, ovate, 6–15 cm long. Primary panicle branches 1 -nate, 5–8 cm long. Spikelets appressed, 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, dorsally compressed, compressed slightly, acuminate, 4 mm long, 1–4 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2.5 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 2.2 mm long.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southwestern USA and South-central USA. Arizona. New Mexico.

Panicum pansum Rendle. *Cat. Afr. Pl. Welw.* 2:177 (1899).

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>: *vide* TROPICOS and Kew Synonymy Database: ST: *Welwitsch 7621*, Angola (K). ST: *Welwitsch 2832*, Angola (K).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (205, Fig 85).

Derivation (Clifford & Bostock 2007): L. extended. Inflorescence branches very long.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms 20–100 cm long. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, parallel-sided, 8–30 cm long, 5–7 mm wide. Leaf-blade surface hispid or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 15–40 cm long. Primary panicle branches spreading. Panicle branches capillary. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. 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, acuminate, 2.5–3 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Burkina, Ghana, Guinea, Ivory Coast, Nigeria, Senegal, Togo. DRC. Chad, Ethiopia (inc. Eritrea), Sudan. Tanzania. Angola, Malawi, Zambia.

Panicum parapaurochaetium A. Camus. *Bull. Soc. Bot. France*, 108: 162 (1961).

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

TYPE from Madagascar. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Madagascar, Ankarana: Humbert.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Rhizomes elongated. Culms decumbent, slender, 15–25 cm long. Leaf-sheaths loose, striately veined, glabrous on surface. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear or lanceolate, 9–13 cm long, 5–7 mm wide. Leaf-blade venation with 6–8 secondary veins, with obscure cross veins. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, loose, 11–15 cm long. Primary panicle branches 5–7 -nate. Spikelets in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, acute, 3 mm long, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 0.25–0.33 length of spikelet, membranous, without keels, 9 -veined. Lower glume apex obtuse. Upper glume ovate, 1.8 mm long, 0.66 length of spikelet, membranous, without keels. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous. Fertile lemma lanceolate or oblong, dorsally compressed, 2.2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex mucronate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum parcum Hitchcock & Chase. *Contrib. U. S. Nat. Herb.* xv. 68 (1910).

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: HT: *E. Palmer 1657*, 9–15 Oct 1891, Mexico: Sinaloa: Lodiego: on the Culiacán River (US-471378; IT: F, ISC, NY, P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. frugal*. Panicles with few spikelets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 50–125 cm long, 2–3 mm diam. Culm-internodes distally pilose, with tubercle-based hairs. Culm-nodes constricted, brown, glabrous. Lateral branches lacking. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane, 1.2–1.3 mm long. Leaf-blades 11–35 cm long, 6–10 mm wide. Leaf-blade surface glabrous or pilose, with tubercle-based hairs. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle. Peduncle 5–9 cm long. Panicle open, ovate, 20–35 cm long, 12 cm wide. Primary panicle branches 1-nate, 9–18 cm long. Panicle branches glabrous 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 ovate, dorsally compressed, acuminate, 4.7–5.1 mm long, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.5–0.8 mm long.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 3.1–3.7 mm long, 0.75 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume ovate, 3.9–4.7 mm long, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 3.8–4.2 mm long, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma ovate, dorsally compressed, 2.8–3.2 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2–1.4 mm long, purple. Caryopsis ellipsoid, pallid.

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica.** Costa Rica, Guatemala, Honduras, Nicaragua.

TDWG4. Mexico State, Morelos, Puebla. Chihuahua, Durango. Sinaloa. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas.

Panicum parviglume Hack. *Oesterr. Bot. Zeitschr.* 1901, 429. (1901).

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: LT: *Pittier 9080*, Costa Rica: in ripis fl. Río Torres prope San José (W; ILT: US-80900 (fragm. ex W)). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: 126 (1910). ST: *Tonduz 8448*, Sep–Nov 1893, Costa Rica: San José: prope S. Francisco de Guadalupe, buissons sur les bords du Rio Corres (W; IST: US-80900 (fragm. ex W), US-471874).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. parvus*, small; gluma, husk. Glume or glumes short especially in comparison to lemmas.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms decumbent, 100–120 cm long, 1.5 mm diam., rooting from lower nodes. Culm-internodes distally pilose, with tubercle-based hairs. Culm-nodes constricted, pubescent. Leaf-sheaths pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.7–1 mm long. Collar bearded. Leaf-blade base broadly rounded, asymmetrical. Leaf-blades ovate, 8–20 cm long, 15–25 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface hispid, sparsely hairy, with tubercle-based hairs. Leaf-blade margins cartilaginous, scabrous.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 20 cm long, 10 cm wide. Panicle axis scabrous. Panicle branches scabrous. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 1–2 length of fertile spikelet, scabrous, bearing a few hairs, 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, compressed strongly, subacute, 2.2–2.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.3–0.5 mm long, 0.2 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 2.2–2.3 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.2–2.3 mm long, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 2 mm long, indurate, shiny, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

$2n = 36$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica. Belize, Costa Rica, El Salvador, Guatemala, Honduras.

TDWG4. Queretaro. Veracruz. Jalisco, Oaxaca. Chiapas.

Panicum paucinode Stapf. *Prain, Fl. Trop. Afr.* ix. 692 (1920).

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

TYPE from Nigeria. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Dalziel 270*, Nigeria (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. paucus*, few; nodum, knot. Culms one- or two-noded.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, slender, 60–90 cm long. Ligule a ciliolate membrane. Leaf-blades flat or convolute, 5–10 cm long, 2–3 mm wide, flaccid. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 15–30 cm long. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 6–12 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 2.5–2.7 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acuminate, mucronate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acuminate, awned, 1 -awned, awn 0.3–1 mm long.

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

Flower and Fruit. Anthers 3, 1.2 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa. Ghana, Guinea, Nigeria. Cameroon. Chad.

Panicum pearsonii F.Bolus. *Ann. Bolus Herb.* i. 107 (1915).

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

TYPE from Namibia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Pearson 8518*, Central Karasberg, Long Hill.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Henry Harold Walsh Pearson (1870–1916) English-born South African botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths woolly. Culms erect or geniculately ascending, 25–50 cm long, 2–4 -noded. Culm-internodes terete, striate. Culm-nodes pubescent. Leaf-sheaths 10

cm long, striately veined, smooth, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades 10–25 cm long, 7–9 mm wide, light green to mid-green. Leaf-blade surface smooth, glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–20 cm long, 6–12.5 cm wide, contracted about primary branches. Primary panicle branches 1-nate, 5–12 cm long. Panicle branches flexuous, smooth or scaberulous, pubescent in axils. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, filiform, 2 mm long, 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 oblong, dorsally compressed, acute, 3.1–3.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate or orbicular, clasping, 2 mm long, 0.5–0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 3–3.5 mm long, 1 length of spikelet, membranous, without keels, 7 -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, ovate, 3–3.5 mm long, 1 length of spikelet, membranous, 9 -veined, acute. Fertile lemma oblong, dorsally compressed, 3 mm long, indurate, pallid, shiny, without keel, 7 -veined, more than 3-veined. Lemma surface smooth. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Namibia.

***Panicum pectinellum* Stapf. *Prain, Fl. Trop. Afr.* ix. 720 (1920).**

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

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: South Central, Belgian Congo: Katanga; near Elisabethville, on dry wooded ground, *Homblé 54* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. pecten*, comb; -ella, diminutive. The lemma bears a row of stiff hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Butt sheaths pubescent. Culms erect, 20–60(–90) cm long. Leaves cauline. Leaf-sheaths pubescent, with tubercle-based hairs or capitate hairs. Ligule a fringe of hairs. Leaf-blades 3–9 cm long, 2–6 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or ovate, (3–)6–13 cm long. Panicle branches capillary, flexuous, pilose, with clavellate hairs. 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, 1.5–2 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 0.2–0.25 length of spikelet, membranous, without keels, 0–3 -veined. Lower glume apex lobed, 3 -fid. Upper glume oblong, 0.5 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex lobed, 5 -fid.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 0.66–0.75 length of spikelet, membranous, 7 -veined, lobed, 5–7 -fid. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, chartaceous, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, chartaceous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa. DRC. Angola, Malawi, Zambia.

***Panicum pedersenii* F.O. Zuloaga. *Hickenia*, 1(27): 148 (1978).**

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: HT: *Pedersen 5868*, 6 Mar 1961, Argentina: Corrientes: Dpto. Mburucuya: Estancia Santa Maria (BAA; IT: Herb. Pedersen).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (273, Fig. 77).

Derivation (Clifford & Bostock 2007): in honor of Troels Mundel Pedersen (1916–) Danish-born Argentinian botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly, hairy. Culms 70–100 cm long. Culm-internodes 5.5–12 cm long. Culm-nodes glabrous. Leaf-sheaths 5–11 cm long, glabrous on surface or pilose, outer margin glabrous or hairy. Ligule a ciliate membrane, 1.7–2.4 mm long. Collar glabrous or pubescent. Leaf-blades lanceolate, 11–27 cm long, 4–7 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 8–23 cm long, 4–15 cm wide. Panicle axis scabrous. Panicle branches glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–7 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 3–4 mm long, 0.9–1.4 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.3–1.7 mm long, 0.33 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9–11 -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, 9–11 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2.5–2.9 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 1.8–2.3 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Corrientes.

Panicum peladoense Henrard. *Blumea*, iv. 504 (1941).

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 Paraguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *B. Balansa* 4357, 3 Apr 1883, Paraguay: Paraguari: Cerro Pelado, près de Paraguari, [25°38'S 57°09'W] (L--908,93–2087; IT: G, K, L, MO-1612657, P, US-147949, US-1108609, US-1649644, US-1647868).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (396, Fig. 84), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (277, Fig. 79), B.Rosengurtt, *Gramineas Uruguayas I* (1970).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 266, Fig.26 (1996)).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Cerro-Pelado, Paraguay.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–60 cm long. Culm-internodes 3.5–10.5 cm long, distally glabrous or pubescent. Culm-nodes purple, pubescent. Lateral branches lacking. Leaf-sheaths 3.5–8 cm long, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.5–1.7 mm long. Collar pilose. Leaf-blades linear or lanceolate, 7–22 cm long, 2–4 mm wide. Leaf-blade surface pilose, densely hairy, hairy adaxially or on both sides, with tubercle-based hairs. Leaf-blade margins cartilaginous, scaberulous, tuberculate-ciliate.

Inflorescence. Inflorescence a panicle. Peduncle 23–27 cm long. Panicle open, ovate, 7–18 cm long, 3–13 cm wide. Panicle axis scabrous, with scattered hairs or glabrous. Panicle branches scabrous, glabrous or pilose, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 2–10 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 2.7–3.3 mm long, 1–1.2 mm wide, falling entire, readily shedding glumes (upper glume).

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.7–2.1 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume primary vein scaberulous. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -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, 7–9 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.9–2 mm long, indurate, black, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, 1.2–1.3 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia. Brazil West Central, Brazil Southeast, Brazil North, Brazil South. Argentina Northwest, Paraguay, Uruguay.

TDWG4. Mato Grosso, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Jujuy. Cordoba, Corrientes, Misiones.

Panicum pellitum Trin. *Gram. Panic.* 198 (1826).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Sandwich Is. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: (LE-TRIN-0880.01, LE-TRIN-0880.02, LE-TRIN-0880.03). HT: *Chamisso s.n.*, [Hawaii]: in Ins. O-Wahu (LE-TRIN-0880.04 (& fig.)). with draw. b="Owahu Kastalsky".

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. covered with skins. The fertile floret(s) is protected by hairy investing glumes or sterile florets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms 4–65 cm long. Culm-internodes distally pilose. Culm-nodes bearded. Lateral branches lacking or sparse. Leaves cauline. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a fringe of hairs, 0.1–0.5 mm long. Leaf-blades 2–17 cm long, 2–5 mm wide. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, obovate, 2–18 cm long. Primary panicle branches spreading. Panicle axis pilose. 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 elliptic, dorsally compressed, acute, 1.5–2.1 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.75–0.9 length of spikelet, membranous, without keels, 5 -veined. Lower glume surface pubescent. Lower glume hairs 0.4–1.5 mm long. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pubescent, hairy above. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, acute. Palea of lower sterile floret 0.25–0.33 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.1–1.3 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.5–0.7 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum perangustatum S.A. Renvoize. *Kew Bull.*, 44(3): 545 (1989).

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

TYPE from Zambia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zambia: Kasama, Misamfu, 22 Jan 1961, *Robinson 4293* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. per, very; angustus, narrow; -atum, possessing. Leaf-blades very narrow.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, slender, 20–30 cm long, firm. Ligule a ciliate membrane. Leaf-blades appressed or ascending, flat or conduplicate, 3–8 cm long, 1–3 mm wide. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, linear, 2–5 cm long. Primary panicle branches appressed. 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 lanceolate, dorsally compressed, 3.5–4.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.25 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9–11 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 2.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex rostrate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Panicum perrieri A.Camus. *Bull. Soc. Bot. France*, lxxii. 371. (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar centr.: Massif d'Andringitra, bord des eaux...", *Perrier de la Bâthie no 13,694*.

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (331, Fig 123).

Derivation (Clifford & Bostock 2007): in honor of Joseph Marie Henri Alfred Perrier de la Bbthie (1872–1958) French botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent, 20–30 cm long. Lateral branches ample. Leaf-sheaths glabrous on surface. Ligule absent. Leaf-blades lanceolate, 2–4 cm long, 2–3 mm wide. Leaf-blade surface smooth, glabrous or pilose, hairy adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 1–3 cm long, bearing few spikelets. Primary panicle branches ascending, 0.5–1 cm long. Panicle branches scaberulous. 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 lanceolate, dorsally compressed, 3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2.8–2.9 mm long, 0.9 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 3 mm long, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 7–9 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acuminate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum peteri Pilger. *Engl. & Prantl, Nat. Pflanzenfam. Aufl. 2*, xiv e. 20 (1940).

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

TYPE from Tanzania. **Basionym or Replaced Name:** *Polyneura squarrosa* Peter, *Repert. Spec. Nov. Regni Veg. Beih.* 53 (1930). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E. Peter 31511*, no date, Tanzania: Pugu (B (destroyed); IT: US-2903349 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Gustav Albert Peter (1853–1937) German botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect, 50–80 cm long. Lateral branches ample. Ligule a ciliate membrane. Leaf-blade base asymmetrical. Leaf-blades ovate, 4–8 cm long, 12–20 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface scaberulous, rough adaxially, pilose, hairy on both sides. Leaf-blade margins ciliate (clavellately).

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, oblong, 4–5 cm long. Panicle branches pilose, with clavellate hairs. 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, acute, 4–4.8 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 7 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 13 -veined, acute. Fertile lemma oblong, dorsally compressed, 4–4.8 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse, with a little green crest. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa. Tanzania. Mozambique, Zimbabwe.

Panicum philadelphicum Bernh. ex Trin. *Gram. Panic.* 216 (1826).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.J. Bernhardt s.n.*, no date, USA: Pennsylvania: Philadelphia Co. (LE; IT: US-80910 (fragm. ex C)).

Recent Synonyms: *Panicum gattingeri* Nash, *Small, Fl. S.E. U.S.* 92. (1903). *Panicum lithophilum* Swallen, *Proc. Biol. Soc. Wash.* 54: 43 (1941).

Panicum tuckermanii.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (461 as subspecies *philadelphicum* & *lithophilum* & *gattingeri*).

Derivation (Clifford & Bostock 2007): L. -icum, belonging to. From Philadelphia but not necessarily indigenous to that place, in that the specimens may have derived from a herbarium in that city.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, slender, 20–50(–60) cm long. Culm-internodes distally hirsute or hispid. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a fringe of hairs, 0.5–1.5 mm long. Leaf-blades 5–15 cm long, 2–7 mm wide, light green. Leaf-blade surface glabrous to hispid, hairy on both sides. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–15 cm long, 0.25–0.33 of culm length, with spikelets clustered towards branch tips. Primary panicle branches ascending or spreading, 1 -nate. Panicle axis glabrous or pubescent. Panicle branches stiff, bearded in axils. Spikelets appressed, in pairs. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 1.2–2(–2.2) mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.3–1.7 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Eastern Canada, North-central USA, Northeast USA, South-central USA, Southeastern USA. New Brunswick, Ontario, Quebec. Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, Oklahoma, Wisconsin. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Texas.

Panicum phippisii S.A. Renvoize. *Kew Bull.*, 44(3): 546 (1989).

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

TYPE from Zambia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zambia: Mporokoso Distr.: Mweru-Wantipa, 16 Apr 1961, *Phipps & Vesey-FitzGerald* 3238 (HT: SRGH; IT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of J.B. Phipps (fl. 1967) Canadian botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, 30–50 cm long, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blades lanceolate, 3.5–6 cm long, 5–10 mm wide, membranous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 6–10 cm long. Panicle branches capillary, flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.15 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. 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, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, dorsally compressed, 2.5 mm long, indurate, dark brown, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Panicum phoinicladus V.N. Naik & B.W. Patunkar. *Reinwardtia*, 9(4): 403 (1980).

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

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Marathwada: Patunkar 2468a (MU holo, K).

Illustrations (Journals): *Reinwardtia* (9: 404, fig.1 (1980)).

Derivation (Clifford & Bostock 2007): Gk. *phoenix*, purple-red; *kladus*, stem. Culms and sheaths purple in color.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Culms erect, 60–120 cm long, woody. Culm-nodes glabrous. Lateral branches ample, arising from mid culm or upper culm. Leaf-sheaths without keel, glabrous on surface. Ligule a ciliate membrane, 0.6–0.9 mm long. Collar glabrous. Leaf-blades erect or ascending or spreading, 10–40 cm long, 3–8 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 5–28 cm long. Primary panicle branches appressed. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, acuminate, 2.4–2.8 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.6–1 mm long, 0.4 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex cuspidate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.7–1.9 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2–1.4 mm long. Caryopsis with adherent pericarp, 1.1 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India, Sri Lanka.

Panicum phragmitoides Stapf. *Prain, Fl. Trop. Afr.* ix. 677 (1920).

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

TYPE from Central African Republic. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Chevalier 5217*, [Central African Republic]: "North Central. Middle Oubangui: ..." (K). ST: *Chevalier 5304*, [Central African Republic]: "North Central. Middle Oubangui: ..." (K). ST: *Chevalier 5742*, [Central African Republic]: "North Central. Middle Oubangui: ..." (K).

Illustrations (Books): W. Robyns (1929 and 1934). Flora Agrostologique du Congo Belge et du Ruanda-Urundi, I. Maydees et Andropogonees and II. Panicees. Bruxelles, Goemaere (195, Pl. 36).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to *Phragmites* in habit.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms robust, (100–)120–180 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane. Leaf-blades tapering towards sheath, 50–75 cm long, 5–15(–20) mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 30–60 cm long. Primary panicle branches 15–25 in number, 3–5 -nate. 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, (2.8–)3–4(–4.2) mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, pallid or purple, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, (7–)9 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 2.8–4.2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Burkina, Ghana, Guinea, Ivory Coast, Nigeria, Togo. Cameroon, Congo, Gabon, DRC. Chad. Tanzania. Angola, Malawi, Mozambique, Zambia, Zimbabwe.

Panicum pilgeri Mez. *Engl. Jahrb.* iv. 146. (1904).

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

TYPE from Nigeria. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: C. Barter 1377, Nigeria (B; IT: K, US-80915 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Robert Knuds Friedrich Pilger (1876–1953) German agrostologist, born on Helgoland before its transfer from British to German administration.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 30–120 cm long, 1.5 mm diam. Culm-internodes distally hirsute. Leaf-sheaths hirsute. Ligule a ciliolate membrane, 1 mm long. Leaf-blades 20–40 cm long, 2–4 mm wide. Leaf-blade surface glabrous or hirsute. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, oblong, dense, 10–27 cm long. Primary panicle branches 2–3 -nate, subdividing 4(–5) times. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 2–3 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5–1 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acuminate, mucicous or mucronate or awned, 1 -awned, awn 0–1 mm long. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acuminate, mucicous or mucronate or awned, 1 -awned, awn 0–1 mm long.

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, acuminate. Fertile lemma oblong, dorsally compressed, 1.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, South tropical Africa. Burkina, Ghana, Guinea, Ivory Coast, Nigeria, Sierre Leone. Chad. Mozambique.

Panicum pilgerianum (Schweick.) Clayton. *Kew Bull.*, 42(2): 402 (1987).

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

TYPE from Namibia. **Basionym or Replaced Name:** *Acroceras pilgerianum* Schweick., *Notizbl. Bot. Gart. Berlin-Dahlem* 14(122): 199–200 (1938)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *M.K. Dinter* 3395, 25 1914, Namibia: Damaraland (US-766249 (fragm. ex B)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Robert Knuds Friedrich Pilger (1876–1953) German agrostologist, born on Helgoland before its transfer from British to German administration.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 30–200 cm long, spongy. Ligule a ciliate membrane. Leaf-blades 10–30 cm long, 5–12 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, linear or oblong, 6–36 cm long, contracted about primary branches. Primary panicle branches appressed or ascending. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acuminate, 4–5.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.15–0.2 length of spikelet, membranous, without keels, 0–3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -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, 5–7 -veined, acute. Fertile lemma oblong, dorsally compressed, 3.5–5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Namibia, Botswana.

Panicum pinifolium Chiov. *Ann. Bot., Roma*, v. 62 (1906).

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

TYPE from Somalia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Somalia, Brava to Zanzibar: Riva 1909–1869 (FI holo).

Illustrations (Books): T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (222, Fig 126).

Derivation (Clifford & Bostock 2007): L. folium, leaf. The leaf-blades resemble those of *Pinus*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths papery, glossy. Culms erect, (30–)60–230 cm long. Culm-internodes shorter and closely spaced at top of culm. Lateral branches ample. Leaves distichous. Leaf-sheaths longer than adjacent culm internode. Ligule a ciliate membrane. Leaf-blades aciculate or linear, parallel-sided, flat or involute, 1–8 cm long, 2–6 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, ovate, 1–2 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular, dorsally compressed, 1.8–2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex cuspidate.

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, cuspidate. Fertile lemma oblong, dorsally compressed, 1.5 mm long, indurate, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa. Somalia. Kenya, Tanzania.

Panicum pleianthum Peter. *Fedde, Repert. Beih.* xl. 1. 198: *Anhang*, 47 (1930).

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

TYPE from Tanzania. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Peter* 20738, Tanzania: Lushoto District, Maramba (B).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):36, t. 7).

Derivation (Clifford & Bostock 2007): Gk. *pleios*, several; *anthos*, flower. Panicle much branched and so bearing many spikelets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms decumbent, 20–60 cm long. Leaves distichous. Leaf-sheaths outer margin hairy. Ligule a ciliate membrane. Leaf-blade base asymmetrical. Leaf-blades lanceolate, tapering towards sheath, 5–10 cm long, 6–10 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or obovate, dense, 4–10 cm long. Primary panicle branches profusely divided. 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, gibbous, 1.7–2.2 mm long, falling entire. Rhachilla internodes elongated between glumes.

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

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, glabrous or pilose, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid or dark brown, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa, Western Indian ocean. Kenya, Tanzania. Mozambique. Madagascar.

Panicum plenum Hitchcock & Chase. *Contrib. U. S. Nat. Herb.* xv. 80 (1910).

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 Mexico. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *O.B. Metcalfe* 739, 18 Sep 1903, USA: New Mexico: Grant Co.: at Mangas Springs: 18 miles NW of Silver City (US-495701; IT: MO-1837660).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (483).

Derivation (Clifford & Bostock 2007): L. *plenus*, bulky. Culms tall and densely tufted.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms erect, robust, 100–200 cm long. Culm-internodes elliptical in section, distally glabrous. Lateral branches lacking or sparse, arising from lower culm. Leaf-sheaths keeled, glabrous on surface or pubescent. Ligule a fringe of hairs, 2 mm long. Leaf-blades erect or ascending or spreading, 20–35 cm long, 7–17 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–50 cm long. Primary panicle branches spreading. Panicle axis smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 3–3.4 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 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 lateral veins prominent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, prominently veined, acute. Fertile lemma elliptic, dorsally compressed, 2–3 mm long, 1 mm wide, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

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

Morelos. Chihuahua, Durango. Veracruz. Sonora. Guerrero.

Panicum poaeoides Stapf. *Prain, Fl. Trop. Afr.* ix. 681 (1920).

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

TYPE from Kenya. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *A. Lindon 213*, no date, Kenya: Nairobi Area (K; US-1445200 (fragm.)). ST: *Dowson 256*, "Nile Land. British East Africa: Nairobi, ..." (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling *Poa* in habit or spikelets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms 30–60(–90) cm long. Lateral branches lacking. Ligule a ciliate membrane. Leaf-blades tapering towards sheath or parallel-sided, 6–8(–26) cm long, 3–8 mm wide. Leaf-blade surface pilose or hispid, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, dense, 6–12(–16) cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2.3–3.2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 1(–5) -veined. Lower glume apex acute or acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2.3–3.2 mm long, indurate, pallid, shiny, without keel, 7 -veined, more than 3-veined. Lemma lateral veins distinct. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa. Rwanda, DRC. Ethiopia (inc. Eritrea). Kenya, Tanzania, Uganda. Mozambique, Zimbabwe.

Panicum pole-evansii C.E.Hubb. *Kew Bull.* 1934, 113. (1934).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *Pole Evans 3039*, Zambia: at river 9 miles south of Lake Tanganyika, creeping over rocks (K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Iltyd Buller Pole-Evans (1879–1968) Welsh-born South African botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms rambling, 50–110 cm long, rooting from lower nodes. Leaf-sheaths as wide as blade at the collar or narrower than blade at the collar. Ligule a ciliate membrane. Leaf-blades lanceolate, 4–10 cm long, 4–12 mm wide. Leaf-blade surface pilose. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 7–9 cm long. Panicle branches pilose, with clavellate hairs. Spikelets spreading, solitary. Fertile spikelets pedicelled. Pedicels present, flexuous.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -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, 9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.3 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface granulate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa. DRC. Tanzania. Zambia.

***Panicum porphyrrhizos* Steud. *Syn. Pl. Gram.* 72 (1854).**

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

TYPE from Ethiopia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.H.W. Schimper U. i. 1842 Sect. 2 1230*, 18 Sep 1842, Ethiopia: prope Gafta (P; IT: L, U, US-1061571 (ex B in 1914), US-1445697, US-945573).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. porphyra, purple dye; rhiza, root. Lower nodes brown-purple.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms erect, 50–200 cm long, 2–4 mm diam. Culm-nodes pallid or brown, glabrous. Ligule a ciliate membrane. Leaf-blades parallel-sided, 15–30 cm long, 5–10 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, (20–)30–50 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, cuspidate or acuminate, 3.5(–4) mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.25–0.33 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex acute or acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 3 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Ghana, Senegal, Niger. Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania, Uganda. Malawi, Mozambique, Zambia, Zimbabwe. Botswana.

***Panicum pseudoracemosum* S.A. Renvoize. *Kew Bull.*, 44(3): 544 (1989).**

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

TYPE from Zambia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zambia: Mwinilunga, Kaomba River, 15 Dec 1937, *Milne-Redhead 3680* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. pseudos, false; racemus, stalk of a bunch of grapes; -osum, abundance. Primary inflorescence axes raceme-like.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 30–70 cm long. Ligule a ciliate membrane. Leaf-blade base amplexicaul. Leaf-blades ovate, 3–6 cm long, 8–17 mm wide. Leaf-blade surface pilose. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 6–10 cm long. Primary panicle branches ascending, simple. 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, gibbous, 1.5–2 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 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, acute. Fertile lemma oblong, dorsally compressed, 1–1.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate. Palea surface papillose.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Panicum pseudowoeltzkowii A.Camus. *Bull. Soc. Bot. France* cv. 248 (1958).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Humbert et Swingle 5345*, [Madagascar]: "... dans les sables, de la côte Mahafaly, ..." ST: *Humbert et Swingle 5302*, [Madagascar]: "... dans les sables, de la côte Mahafaly, ...".

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (337, Fig 126).

Derivation (Clifford & Bostock 2007): Gk *pseudos*, false. Resembling *Panicum woeltzkowii*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes short, woody. Stolons present. Culms erect, 10–40 cm long. Culm-internodes distally glabrous. Ligule a fringe of hairs. Leaf-blades flat or involute, 3–6 cm long, 1.5–7 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 2.5–6 cm long. Primary panicle branches ascending, 1–2 -nate. Panicle branches capillary, glabrous. 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 orbicular, dorsally compressed, obtuse, 1.3–1.7 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume 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, 1.2–1.3 mm long, indurate, shiny, without keel, more than 3-veined. Lemma margins convolute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum psilopodium Trin. *Gram. Panic.* 217. (1826).

Regarded by K as a synonym (*P. sumatrense*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from ?Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: (LE; ST: BM, CGE, L(fragm.)). LT designated by Veldkamp, *Blumea* 41: 206 (1996).

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (566), C-C Hsu, *Taiwan Grasses* (1975), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (pl.804), H.J.Noltie, *The Grasses of Bhutan* (2000) (691, Fig. 38), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (463).

Derivation (Clifford & Bostock 2007): Gk. *psilos*, bare; *pous*, foot. Pedicels glabrous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 14–120 cm long, spongy or firm. Culm-nodes glabrous. Lateral branches sparse or fastigiate. Ligule an eciliate membrane,

truncate. Leaf-blade base cordate. Leaf-blades linear or lanceolate, 5–45 cm long, 5–12 mm wide. Leaf-blade surface glabrous or hispid, with tubercle-based hairs. Leaf-blade apex abruptly acute or acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 5–33 cm long. Primary panicle branches spreading, whorled at lower nodes, 2–6 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–6 mm long, scaberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, subacute, 2.3–3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 5–7(–9) -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma ovate, dorsally compressed, 2 mm long, indurate, pallid, shiny, without keel, 7–9 -veined, more than 3-veined. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, ovoid or orbicular, 1.5 mm long.

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

Country /Province /State. China, Eastern Asia. China South Central, Tibet. Japan, Taiwan. **Indian Subcontinent, Indo-China, Malesia.** Eastern Himalaya, India, Pakistan, Sri Lanka. Myanmar, Thailand. Java, Philippines.

TDWG4. Guizhou, Yunnan. Darjeeling, Bhutan.

Panicum pusillum Hook. f. *Journ. Linn. Soc.* vii. 227. (1864).

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

TYPE from Cameroun. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Mann 2090*, Cameroun: Cameroon Mountain (K).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (205, Fig 85).

Derivation (Clifford & Bostock 2007): L. very small. Plants of small stature.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent, weak, (1.5–)5–40 cm long, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blades lanceolate, tapering towards sheath or parallel-sided, 0.6–4(–4.5) cm long, 1.5–6 mm wide, membranous. Leaf-blade venation without cross veins. Leaf-blade surface pilose. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 1–2(–5) cm long. Primary panicle branches spreading or reflexed. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, 1.5–2 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface glabrous or pilose, with tubercle-based hairs. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface glabrous or pilose, with tubercle-based hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, glabrous or pilose, with tubercle-based hairs, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 18$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa. Nigeria, Sierre Leone. Cameroon, Rwanda, DRC. Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania, Uganda. Malawi.

Panicum pycnocladus Tutin. *Journ. Bot.* lxxii. 340. (1934).

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

TYPE from Guyana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T.G. Tutin 508*, 20 Aug 1933, Guyana: Kaiteur savanna: Potaro River (BM; IT: K, US-1760654, US-2954373). Tutin 651 is marked as the type at BM; Tutin 508 was published as the type.

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (158, Fig. 57).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms leaning, 12–60 cm long, rooting from lower nodes. Culm-internodes terete, 3–15 cm long, distally glabrous or hirsute. Culm-nodes constricted, pubescent. Lateral branches ample, arising from upper culm. Leaf-sheaths 2–5 cm long, glabrous on surface or hirsute, outer margin hairy. Ligule a ciliate membrane, 1–1.5 mm long. Collar pubescent. Leaf-blade base amplexicaul, asymmetrical. Leaf-blades lanceolate or oblong, 2–4.5 cm long, 5–18 mm wide. Leaf-blade surface glabrous to pilose, sparsely hairy or moderately hairy or densely hairy. Leaf-blade margins scabrous, ciliate, hairy at base. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Peduncle 6–20 cm long, glabrous or pubescent above. Panicle open, ovate, 3–6 cm long, 1.5–6 cm wide. Primary panicle branches not whorled or whorled at lower nodes. Panicle axis eglandular, smooth or tuberculate, glabrous or pilose. Panicle branches flexuous, eglandular, glabrous in axils or pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, glabrous or ciliate, hairy above.

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, 2.2–3 mm long, 0.8–0.9 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 1.2–1.8 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 3(–5) -veined. Lower glume apex acuminate. Upper glume elliptic, 1.9–2.7 mm long, 0.9 length of spikelet, membranous, without keels, 9 -veined. Upper glume surface glabrous or pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, glabrous or pilose, acute. Palea of lower sterile floret 1.5–1.8 mm long, 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.8–2 mm long, 0.8 mm wide, indurate, without keel. Lemma surface scaberulous, rough above. Lemma margins involute. Lemma apex acute, laterally pinched (slightly). Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.8 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.5 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America and Brazil. Brazil Northeast.

Bahia.

***Panicum pygmaeum* R. Br. *Prod.* 191. (1810).**

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: IT: *R. Brown s.n.*, 1803–1805, Australia: New South Wales (US-2830923 (fragm.)).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (317), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (195, Fig. 30), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: K.Domin, *Bibliotheca Botanica* 85 (1915) (311, fig.69).

Derivation (Clifford & Bostock 2007): L. dwarf. Culms shorter than those of many other species in the genus.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent, weak, 15–20 cm long, 4–5 -noded, rooting from lower nodes. Culm-nodes glabrous or pubescent. Leaf-sheaths tight, longer than adjacent culm internode, pilose, with tubercle-based hairs, outer margin hairy. Ligule a fringe of hairs, 0.5 mm long. Leaf-blade base broadly rounded, without a false petiole or with a brief petiole-like connection to sheath. Leaf-blades spreading, linear or lanceolate, 1–4 cm long, 1–6 mm wide, membranous. Leaf-blade midrib indistinct. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, ovate, 2–6 cm long. Primary panicle branches spreading, simple. Panicle branches capillary, flexuous, smooth or scabrous, with scattered hairs, with tubercle-based hairs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–2 mm long.

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

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface smooth or asperulous, rough above. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, smooth or scaberulous, rough above, acute. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, shiny, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. North, Central, South East. Coast, Tablelands.

Panicum quadriglume (Doell) Hitchcock. *Contrib. U. S. Nat. Herb.* xxiv. 460 (1927).

Accepted by: 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 cayennense* var. *quadriglume* Döll, *Fl. Bras.* 2(2): 220 (1877). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Regnell III 1406*, 18 Mar 1847, Brazil: Minas Gerais: Caldas (W; IT: P, US-742411, US-80560 (fragm. ex BR)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (396, Fig. 84), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (291, Fig. 84).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 269, Fig. 27 (1996)), *Ruizia* (13:321, Fig 39c-d (1993)).

Derivation (Clifford & Bostock 2007): L. quatuor, four; gluma, husk. Spikelets with two sterile lemmas in addition to the two glumes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 40–120 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs. Leaf-blades 10–40 cm long, 4–10 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 2 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, dorsally compressed, acute, 3–4 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 0.8–0.9 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 2 or more, similar, barren (lower) or barren (upper), without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.5–2 mm long, indurate, dark brown, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mato Grosso, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo. Misiones.

Panicum queenslandicum Domin. *Fedde, Repert.* x. 58 (1911).

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), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Hartmann in Herb. von Mueller*, 1877, (PR; IT: K).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (318), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (320), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (195, Fig. 30), 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. -ica, belonging to. From Queensland, Australia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths villous. Culms 30–70 cm long, 3 -noded. Culm-internodes scaberulous. Culm-nodes glabrous. Leaf-sheaths striately veined, glabrous on surface. Ligule a fringe of hairs, 1 mm long. Leaf-blades convolute, 10–25 cm long, 1–2.5 mm wide, firm. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–25 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading, whorled at lower nodes, branching divaricately, 10–23 cm long. Panicle branches stiff, with prominent pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–10 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acuminate, 3–7 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 0.75–0.85 length of spikelet, membranous, without keels, 5 -veined. Lower glume lateral veins transversely connected at apex. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Palea of lower sterile floret 0.33 length of lemma. Fertile lemma oblong, dorsally compressed, 5–6 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG), Continent. Europe (*), Tropical Asia, Australasia.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Malesia, Papuasia.** Moluccas. New Guinea West Papua (Irian Jaya). New Guinea. **Australia.** Queensland, New South Wales.

TDWG4. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

Panicum racemosum (Beauv.) Spreng. *Syst. i.* 313. (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), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Uruguay. **Basionym or Replaced Name:** *Monachne racemosa* P. Beauv., *Ess. Agrostogr.* 168, t. 10, f. 10 (1812). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Commerson s.n.*, Uruguay: Montevideo (P).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (318), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), S.A.Renouze, *The Grasses of Bahia*, 1984 (142, Fig. 49), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (675, Fig. 143 & 688, Fig. 146), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (281, Fig.107), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (545, Fig. 143), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (533, Fig. 359), B.Rosengurt, *Gramineas Uruguayas I* (1970) (325, Fig. 138).

Illustrations (Journals): *Darwiniana* (22: 25, Fig.6l-n (1979)).

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 Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Culms 45–55 cm long, 1.4–3 mm diam. Culm-nodes brown, bearded. Leaf-sheaths hispid, with reflexed hairs. Ligule a fringe of hairs, 1.5–2.5 mm long. Leaf-blades aciculate, convolute, 23–43 cm long, 0.6–3.5 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 10.5–25 cm long, contracted about primary branches. Primary panicle branches appressed, simple, 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 ovate, dorsally compressed, 5–8 mm long, 3–5 mm wide, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume obovate, 0.66–0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume surface villous. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume surface villous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, villous, obtuse. Fertile lemma oblong, dorsally compressed, 5–8 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute, pilose, hairy below. Lemma apex obtuse. Palea involute, indurate.

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

Country /Province /State. **Australia.** New South Wales, Victoria. **Brazil, Southern South America.** Brazil Northeast, Brazil Southeast, Brazil South. Argentina Northeast, Chile Central, Chile South, Uruguay.

TDWG4. Coast. Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Catarina, Rio Grande do Sul. Buenos Aires, Entre Rios. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Biobio, La Araucania. Los Lagos.

Panicum ramosius Hitchcock. *Journ. Bot.* 1933, lxxi. 6 (1933).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Hawaii. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: USA: Hawaii: Lanai: Manili, 2 May 1918, *Munro s.n.* (HT: US-1535767).

Illustrations (Books): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1572, Pl. 233).

Derivation (Clifford & Bostock 2007): *L. ramus*, branch; -osa, abundance. Inflorescences or culms much branched.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 25–120 cm long. Culm-internodes distally glabrous or pubescent. Culm-nodes bearded. Lateral branches ample. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 1–2 mm long. Leaf-blades 4–10 cm long, 2–5 mm wide. Leaf-blade surface smooth or scaberulous, glabrous or hirsute, hairy adaxially.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, linear, 5–15 cm long. Primary panicle branches appressed. Panicle axis scabrous, villous. Panicle branches scabrous, glabrous or pubescent. 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, dorsally compressed, acuminate, 3–4.5 mm long, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.3 mm long.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume surface villous, hairy below or between veins. Lower glume hairs 1–2 mm long. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface villous, hairy below or between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 2.5–2.7 mm long, 0.6–0.8 length of spikelet, membranous, 7 -veined, pubescent, hairy above, acute. Fertile lemma elliptic or oblong, dorsally compressed, 1.8–2 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.8–1.1 mm long, pallid. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. **North-central Pacific.** Hawaii.

Panicum repens L. *Sp. Pl. ed. II.* 87. (1762).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae

ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Spain. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Spain.; *Alstroemer s.n.* (LT: LINN-80.74).

Illustrations (Books): W. Robyns (1929 and 1934). Flora Agrostologique du Congo Belge et du Ruanda-Urundi, I. Maydees et Andropogonees and II. Panicees. Bruxelles, Goemaere (205, Pl. 37), R.M.Pollhill, F.T.E.A., *Gramineae* 3(1982):483, Fig.121), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 402), L.Boulos, *Flora of Egypt* 4 (2005) (288, Pl. 85), N.L.Bor, *Gramineae* in *Flora of Iraq* (1968) (489, Pl. 187), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (568), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl. 805 & Pl. 806), H.B.Gilliland, *Grasses of Malaya* (1971) (136, Fig. 25), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (105, Fig. 103), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (318), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (198, Fig. 31), 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) (473), F.W.Gould, *The Grasses of Texas* (1975) (457, Fig. 243), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (261, Fig. 215), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (703, Fig. 150), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (304, Fig. 122), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (343, Fig. 147), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (19, Fig. 8), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 710).

Images: L.Boulos, *Flora of Egypt* 4 (2005);, H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005);, H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);, F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. repo, crawl. Rhizome well developed.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Stolons absent or present. Culms erect or geniculately ascending, 30–100 cm long. Leaves distichous. Ligule a ciliate membrane. Leaf-blades erect, flat or convolute, 7–25 cm long, 2–8 mm wide, coriaceous, stiff, glaucous. Leaf-blade apex acuminate or attenuate, muticous or pungent.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 5–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.33 length of spikelet, hyaline, without keels, 1(–3) -veined. Lower glume lateral veins absent or obscure. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, (7–)9 -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, 7–9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $N = 9$ (1 ref TROPICOS), or 18 (1 ref TROPICOS), or 27 (2 ref TROPICOS). $2n = 36$ (2 refs TROPICOS).

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

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

Country /Province /State. : GB Aliens (Ryves et al). : Balears, Corsica, France, Portugal, Sardinia, Spain, Azores. : Albania, Greece, Italy, Crete, Sicily, Yugoslavia. **Northern Africa, Macaronesia, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean.** Algeria, Egypt, Libya, Morocco, Tunisia. Canary Is, Madeira. Ghana, Guinea, Ivory Coast, Mali, Nigeria, Senegal, Sierre Leone, Niger. Cameroon, Gabon, Rwanda, DRC. Chad, Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Kwazulu-Natal, Western Cape, Eastern Cape. Madagascar, Seychelles. **Western Asia, Arabian Peninsula, China, Eastern Asia.** Iraq. China South Central, Hainan, China Southeast. Japan, Nansei-Shoto, Taiwan. Japan Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Bangladesh, Sri Lanka. Andaman Is, Cambodia, Laos, Myanmar, Thailand, Vietnam. Borneo, Cocos (Keeling) Is, Java, Lesser Sunda Is, Malaya, Singapore, Philippines, Sulawesi, Sumatra. New Guinea West Papua (Irian Jaya). New Guinea. **Australia.** Queensland (*), New South Wales (*). **Northwestern Pacific, North-central Pacific.** Caroline Is (*), Marianas (*). Hawaii (*). **South-central USA, Southeastern USA, Mexico.** Texas. Alabama, Arkansas, Delaware, Florida, Georgia,

Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Northeast Mexico, Gulf (Mexico). **Mesoamerica, Caribbean, Brazil, Southern South America.** Belize. Cuba. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Argentina Northeast.

TDWG4. Fujian, Guangdong, Guangxi, Jiangxi, Zhejiang. Sichuan, Yunnan. Sikkim. Assam, Tripura. Andhra Pradesh, Bihar, Kerala, Karnataka. Orissa, Rajasthan, Tamilnadu, West Bengal. Central, South East Coast, Western Slopes, Western Plains. Corrientes, Entre Rios, Misiones. Guanajuato, Tamaulipas. Veracruz.

Panicum rigidum Balf. *Proc. Roy. Soc. Edinb.* xii. 97 (1884).

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

TYPE from Socotra. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Balfour, Cockburn & Scott 130*, Socotra, prope Galonsir et Tamarida ST: *Balfour, Cockburn & Scott 561*, Socotra, prope Galonsir et Tamarida ST: *Schweinfurth 346*, Socotra, prope Galonsir et Tamarida.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. stiff. Culms, spikelets or inflorescence branches held stiffly erect.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms rambling, 30–60 cm long, wiry. Lateral branches sparse. Leaves distichous. Ligule a fringe of hairs. Leaf-blades filiform, involute, 1–3 cm long, 0.5–1 mm wide, stiff. Leaf-blade apex attenuate, pungent.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 1.5–4 cm long. Primary panicle branches ascending or spreading. Panicle branches stiff. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, obtuse, 1.3–1.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 1(–3) -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, acute. Fertile lemma oblong, dorsally compressed, 1 mm long, indurate, pallid, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa. Socotra.

Panicum robustum B.K.Simon. *Austrobaileya*, 3(4): 598 (1992).

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: Queensland: North Kennedy Dist.: Brandy Creek road, 12 km from its source, 13 Apr 1978, *B.K. Simon, J.R. Clarkson & N.B. Byrnes 3370* (HT: BRI-AQ344285; IT: BRI, CANB, DNA, K, L, MO, NSW).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Illustrations (Journals): *Austrobaileya* (3:599, Fig.6 (1992)).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms erect or geniculately ascending, robust, 80–180 cm long, 3–5 -noded. Lateral branches lacking or sparse. Leaf-sheaths mostly shorter than adjacent culm internode, without keel. Ligule a ciliate membrane, 2 mm long. Leaf-blades 10–35 cm long, 5–10 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface hispid, with tubercle-based hairs. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 25–40 cm long. Primary panicle branches spreading, 10–18 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 2–4 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret

male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 4.5–5 mm long, 1 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–5 mm long, 1 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume lanceolate, 3.5–4 mm long, 0.7–0.8 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 3.5–4 mm long, 0.7–0.8 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long. Caryopsis 2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North, Central.

Panicum robynsii A.Camus. *Bull. Mus. Hist. Nat. Paris, Ser. II. v. 336* (1933).

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

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Humbert 8759*, Zaire: Beni (P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Frans Hubert Edouard Arthur Walter Robyns (1901–1986), Belgian botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent or rambling, slender, 25–100 cm long. Ligule a ciliate membrane. Leaf-blades lanceolate or ovate, tapering towards sheath, 5–10 cm long, 5–15 mm wide, membranous. Leaf-blade venation with distinct cross veins. Leaf-blade surface scaberulous, glabrous or pilose, sparsely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, borne along a central axis, paucilateral, 2–5 cm long. Central inflorescence axis 12–20 cm long. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal.

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

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface scabrous. Lower glume apex acute, mucronate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3–7 -veined. Upper glume surface scabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, hyaline, 3–5 -veined, scabrous, obtuse. Fertile lemma oblong, dorsally compressed, 2 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa, Western Indian ocean. DRC. Kenya, Tanzania, Uganda. Angola. Madagascar.

Panicum rostellatum Trin. *Mem. Acad. Petersb. Ser. VI. iii. II. 288* (1835).

Regarded by K as a synonym (*P. sciurotis*).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *s.coll.*, Brazil: Bahia: in sabulosis umbrosis (LE-TRIN-0929.02). ST: *Anon. s.n.*, Sep 1821, Brazil: Bahia: in arenosis prope Ilheos (LE-TRIN-0929.01; IST: US-974732 (fragm. ex LE)).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (158, Fig. 57).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, slender, 5–26 cm long. Ligule a ciliate membrane. Leaf-blade base amplexicaul. Leaf-blades oblong or ovate, 1.5–3.5 cm long, 7–15 mm wide. Leaf-blade midrib evident. Leaf-blade surface pilose, densely hairy, hairy on both sides. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 2–6.5 cm long. 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 elliptic or ovate, dorsally compressed, obtuse, 1.5–1.8 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, puberulous, obtuse. Fertile lemma elliptic, dorsally compressed, 1.5–1.8 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Bahia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe.

Panicum rudgei Roem. & Schult. *Syst.* ii. 444 (1817).

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:** *Panicum scoparium* Rudge, *Pl. Guian.* 1: 21, t. 29 (1805). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Martin s.n.*, no date, French Guiana (BM; IT: US-2830940 (fragm. ex BM & photo)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (276, Fig. 245), S.A.Renvoize, *Gramineas de Bolivia* (1998) (387, Fig 82), S.A.Renvoize, *The Grasses of Bahia*, 1984 (150, Fig. 53 as *P. rudgii*), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (385, Fig 141), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (422, Fig 75).

Derivation (Clifford & Bostock 2007): in honor of Edward Rudge (1763–1846) English magistrate and amateur botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect or geniculately ascending, 75–125 cm long, 1.5–3 mm diam. Culm-internodes distally pilose. Culm-nodes bearded. Lateral branches ample, arising from upper culm. Leaf-sheaths pilose. Ligule a ciliate membrane, 1.5–2 mm long. Leaf-blades 20–40 cm long, 8–14 mm wide, stiff. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences intermingled with terminal. Panicle open, ovate, effuse, 30–40 cm long, 10–20 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 ovate, dorsally compressed, acuminate, 3–3.4 mm long, falling entire. Rhachilla internodes elongated between glumes or elongated below proximal fertile floret. Rhachilla elongation 0.5 mm long.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 2.7–2.9 mm long, 0.75 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume surface pubescent, hairy above. Lower glume apex acuminate. Upper glume ovate, 3–3.4 mm long, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface pubescent, hairy above. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.5 mm long, 1 length of spikelet, membranous, 7–9 -veined, pubescent, hairy above, acuminate. Fertile lemma elliptic, dorsally compressed, 1.7–1.9 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.6–0.9 mm long, purple.

$2n = 18$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama.

Jamaica, Trinidad-Tobago. French Guiana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South.

TDWG4. Roraima, Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso, Goias, Bahia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Tabasco.

Panicum ruspolii Chiov. *Ann. Ist. Bot. Roma*, vii. 64. (1897).

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

TYPE from Somalia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Surro, Somali, *D. Riva 66(1444)*.

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (200, Fig 83).

Derivation (Clifford & Bostock 2007): in honor of Eugenio Ruspoli (1866–1893) Italian nobleman who travelled in Somalia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes short. Basal innovations extravaginal. Culms 40–80 cm long, woody. Culm-internodes glaucous. Lateral branches fastigiate. Leaf-sheaths longer than adjacent culm internode, glabrous on surface or pubescent. Ligule a ciliate membrane. Leaf-blades flat or involute, 15–30 cm long, 4–7 mm wide. Leaf-blade surface pilose. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or obovate, 10–18 cm long, 3–4 cm wide. Primary panicle branches 1–2 -nate, 5–8 cm long. Panicle branches capillary, scaberulous. Spikelets in pairs or in threes. 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 ovate, dorsally compressed, compressed slightly, acuminate, 3.5–4 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3–7 -veined. Lower glume apex acuminate, mucronate. Upper glume lanceolate or ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate, mucronate.

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, 9 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 2.5–3 mm long, chartaceous or indurate, pallid or yellow, shiny, without keel. Lemma margins involute. Lemma apex obtuse or acute. Palea involute, chartaceous or indurate.

Flower and Fruit. Anthers 3, 2 mm long, purple. Stigmas purple.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa. Ethiopia (inc. Eritrea).

Panicum sabiense S.A. Renvoize. *Kew Bull.*, 34(3): 552 (1979).

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

TYPE from Zimbabwe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zimbabwe, Lower Sabi: Rattray 1270 (K holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Lower Sabi, Zimbabwe.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly, hairy. Culms 40–100 cm long, wiry. Lateral branches lacking or sparse. Leaf-sheaths pilose. Ligule a ciliate membrane. Leaf-blades 9–27 cm long, 2–6 mm wide. Leaf-blade surface pilose, sparsely hairy. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 8–18 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 2.4–2.8 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined.

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, without grooves. Fertile lemma oblong, dorsally compressed, 2.4–2.8 mm long, indurate, without keel. Lemma surface rugose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate. Palea surface rugose.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zimbabwe.

Panicum sanctae-luciae L.Fish. *Bothalia* 39 (2): 238 (2009).

Illustrations (Journals): *Bothalia* (39 (2): 239, Fig. 17 (2009)).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Kwazulu-Natal.

Panicum sadinii (Vanderyst) Renvoize. *Kew Bull.* xxii. 485 (1968).

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

TYPE from DRC. **Basionym or Replaced Name:** *Brachiaria sadinii* Vanderyst, *Bull. Agric. Congo Belge* 16: 665 (1925). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Vanderyst 5325*, May 1915, Zaire (BR). ST: *Vanderyst 6313*, Zaire (BR). ST: *Vanderyst 5341*, Apr 1915, Africa.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Very likely a misspelling of *sabinei*. (In honor of Edward Sabine (1788–1883) English astronomer and Arctic explorer).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 90–150 cm long. Ligule a ciliate membrane. Leaf-blade base cordate or amplexicaul. Leaf-blades lanceolate, 4–12 cm long, 6–20 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–13 cm long. Panicle branches pilose, with clavellate hairs. 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, 2.5–3.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret scabrous. Fertile lemma oblong, dorsally compressed, 2.5–3.5 mm long, indurate, yellow, shiny, without keel, 7 -veined, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. *N* = 18 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, South tropical Africa. Guinea, Liberia, Sierre Leone. DRC. Angola, Zambia.

Panicum sarmentosum Roxb. *Fl. Ind.* i. 308. (1820).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*) (& as *Isachne faurei*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Indonesia: Sumatra: introduced by Dr. Charles Campbell into the Botanic Garden in 1804, *Roxburgh 1778* (HT: BM; IT: CAL, K).

Illustrations (Books): H.B.Gilliland, *Grasses of Malaya* (1971) (Pl 4), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (105, Fig. 104), E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (135, Pl. 53), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:87(1980)).

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

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 100–1500 cm long (long), rooting from lower nodes. Culm-nodes swollen. Lateral branches sparse. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs. Leaf-blade base broadly rounded or cordate. Leaf-blades spreading, 30–40 cm long, 10–20 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate or pyramidal, 8–35 cm long. Primary panicle branches whorled at most nodes. Panicle branches capillary, smooth, pubescent 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 ovate, dorsally compressed, obtuse, 1.3–2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume oblong or ovate, clasping, 0.6–1 mm long, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex obtuse. Upper glume ovate or orbicular, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, hairy at apex. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate or orbicular, 1 length of spikelet, membranous, 5 -veined, pubescent, hairy at apex, obtuse. Palea of lower sterile floret 1 length of lemma. Fertile lemma oblong or ovate, dorsally compressed, 1.3–2 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. China, Eastern Asia. Hainan. Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** India. Laos, Myanmar, Thailand, Vietnam. Borneo, Java, Malaya, Singapore, Philippines, Sulawesi, Sumatra. New Guinea West Papua (Irian Jaya). New Guinea.

TDWG4. Arunachal Pradesh, Sikkim. Assam, Meghalaya, Tripura. Bihar. Maharashtra.

Panicum scabridum Doell. *Mart. Fl. Bras. ii. II. 201. (1877).*

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: ST: *R. Spruce 1381–3*, no date, Brazil: Amazonas (US-81098 (fragm. ex K, Freiburg, P)). ST: *Spruce 1281–3*, Brazil: Amazonas: Manaus, Campo de Jauari (KR; IT: K, P, US (fragm. ex KR)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. rough. Plants in part or totally rough to the touch.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–110 cm long. Culm-internodes thin-walled or solid, 10–15 cm long. Culm-nodes glabrous. Lateral branches ample, arising from upper culm. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.2–0.6 mm long. Leaf-blades linear or lanceolate, flat or conduplicate, 10–21 cm long, 3–10 mm wide. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence a panicle. Peduncle 9–23 cm long, glabrous. Panicle open, ovate, dense, 7–20 cm long. Primary panicle branches ascending or spreading. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, flexuous, scabrous, glabrous or puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or orbicular, dorsally compressed, 1.3–1.8 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.6–1.1 mm long, 0.5–0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume lateral veins transversely connected at apex. 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, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3–5 -veined, acute. Fertile lemma elliptic or ovate, dorsally compressed, 1.1–1.4 mm long, indurate, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis black.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. Bolivia, Colombia. Brazil North.

Amazonas, Acre, Rondonia.

Panicum schinzii Hack. ex Schinz. *Verh. Bot. Ver. Brand.* 142. (1888).

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), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960) (as *P. laevifolium*).

TYPE from Namibia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H. Schinz 641*, 1886, Namibia: Olukonda (Z: IT: W(fragm., US-81101)). CS.

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (334, Fig 290 as *P. laevifolium*), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (464, Fig 398), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (318), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): in honor of Hans Schinz (1858–1941) Swiss traveller and botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 30–120 cm long. Ligule a ciliate membrane. Leaf-blades 10–40 cm long, 5–15 mm wide, glaucous.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, oblong or ovate, 10–35 cm long. Panicle branches capillary, flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse or subacute, 2.3–2.8 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.15–0.2 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, glaucous, without keels, 7–9 -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, 7–9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, dark brown, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe (*), Africa, Tropical Asia, Australasia (*).

Region. Northern Europe (*).

Country /Province /State. : Great Britain (*). **South tropical Africa, Southern Africa.** Angola, Zimbabwe. Namibia (?), Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Northern Cape, Western Cape, Eastern Cape. **Malesia.** Java. **Australia, New Zealand.** Western Australia (*), South Australia (*), Queensland (*), New South Wales (*), A.C.T. (*). New Zealand North I, New Zealand South I.

TDWG4. South-West. Southern. South East. Coast, Tablelands, Western Slopes, Western Plains.

Panicum sciurotis Trin. *Gram. Panic.* 228. (1826).

Accepted by: 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: *Chamisso s.n.*, s.d., [Brasil]: in Santa Catharina (LE-TRIN-0942.01).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (171, Fig. 63), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (720, Fig. 152).

Derivation (Clifford & Bostock 2007): Gk *skiouros*, squirrel. The inflorescence resembles a squirrel's tail.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent, 5–25 cm long, rooting from lower nodes. Culm-internodes elliptical in section, 2–8 cm long, distally hirsute. Culm-nodes black, pubescent. Lateral branches ample, arising from lower culm. Leaf-sheaths 1–5 cm long, hirsute, outer margin hairy. Ligule a ciliate membrane, 0.4 mm long. Collar pilose. Leaf-blade base amplexicaul. Leaf-blades lanceolate or oblong, 1.5–9 cm long, 8–28 mm wide. Leaf-blade midrib indistinct. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences similar to terminal. Peduncle 5–7.5 cm long, pilose above. Panicle open, ovate, effuse, 2–7 cm long, 1–5 cm wide. Panicle axis

tuberculate, pilose. Panicle branches flexuous, with scattered hairs or glabrous, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, smooth, 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 elliptic, dorsally compressed, 1.5–1.7 mm long, 0.7–0.8 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, not clasping, 0.3–0.4 mm long, 0.2–0.25 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 5(–7) -veined. Upper glume lateral veins obscure. Upper glume surface pilose. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, obscurely veined, pilose, obtuse. Palea of lower sterile floret 0.9 mm long. Fertile lemma elliptic, dorsally compressed, 1.4–1.5 mm long, 0.5–0.7 mm wide, indurate, shiny, without keel. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, obovoid. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Western South America, Brazil. Jamaica. Brazil Northeast, Brazil North, Brazil South.

TDWG4. Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Panicum sciurotoides F.O. Zuloaga & O. Morrone. *Novon*, 1(1): 1 (1991).

Accepted by: 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: *Y. Mexia 5819*, 13 May 1931, Brazil: Minas Gerais: Dist. Diamantina: Christais, near Corrigo duas Pontes, damp earth in shade, common, 1160 m (HT: MO; IT: G, K, M, P, R, US-1571318).

Illustrations (Journals): *Novon* (1: 2, Fig. 1 (1992)).

Derivation (Clifford & Bostock 2007): Gk *-oides*, resembling. Resembling *Panicum sciurotis*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 10–85 cm long, rooting from lower nodes. Culm-internodes thin-walled, 2.5–11.5 cm long, distally glabrous or hispid. Culm-nodes constricted, black, pubescent. Lateral branches ample, arising from upper culm. Leaf-sheaths 3–6.5 cm long, striately veined, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane. Collar pilose. Leaf-blade base amplexicaul, asymmetrical. Leaf-blades lanceolate or ovate, 3–10 cm long, 8–20 mm wide. Leaf-blade surface glabrous or pubescent or hirsute, hairy adaxially, with tubercle-based hairs. Leaf-blade margins scabrous, ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, effuse, 2.5–9 cm long, 1.5–8.5 cm wide. Panicle axis villous. Panicle branches flexuous, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.5–1.9 mm long, 0.5–0.7 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.4–0.9 mm long, 0.33–0.5 length of spikelet, membranous, without keels, 1–3(–7) -veined. Lower glume apex truncate to acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, pubescent, acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.2–1.7 mm long, 0.4–0.6 mm wide, indurate, shiny, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, 1.1 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, and Brazil. Brazil North.

Panicum seminudum Domin. *Biblioth. Bot.* 1 v. 320 (1915).

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), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*.

TYPE from Australia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Domin 1/1910*, Jan 1910, Australia: Queensland (PR; IT: K (fragm.)).

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);, K.Domin, *Bibliotheca Botanica* 85 (1915) (321, Fig.74 as var. *cairnsianum*).

Derivation (Clifford & Bostock 2007): L. semi-, half; nuda, bare. Only part of the plant bearing hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 40–90 cm long, 2–5 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or pubescent, outer margin glabrous or hairy. Ligule a ciliate membrane, 0.8–1.5 mm long. Leaf-blades 4–30 cm long, 3–9 mm wide. Leaf-blade surface smooth or scabrous, glabrous or pilose. Leaf-blade margins scabrous, glabrous or ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–30 cm long, evenly furnished or with spikelets clustered towards branch tips. Primary panicle branches spreading, 10–25 cm long, bearing 20–60 fertile spikelets on each lower branch. Panicle axis scabrous. Panicle branches scabrous, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–7 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 3.1–3.7 mm long, 1–1.8 mm wide, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.4–0.5 mm long.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 2.3–3.3 mm long, 0.75–0.95 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume lateral veins thickened. Lower glume apex acute or acuminate. Upper glume lanceolate or ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex obtuse or acute or acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate or ovate, 1 length of spikelet, membranous, 5 -veined, acute or acuminate. Fertile lemma elliptic, dorsally compressed, 1.9–2.2 mm long, indurate, without keel. Lemma lateral veins distinct. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2–1.4 mm long. Caryopsis with adherent pericarp.

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

Country /Province /State. Malesia, Papuasias. New Guinea. **Australia.** Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley. Darwin & Gulf. North, Inland.

Panicum semitectum Swallen. *Phytologia*, xiv. 68 (1966).

Regarded by K as a synonym (*P. rude*).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum emergens* Döll, *Fl. Bras.* 2(2): 269 (1877). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *L. Riedel 1961*, no date, Brazil: São Paulo (US-974685 (fragm. ex LE), US-974686 (fragm. ex K, KR)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. semi-, half; tectum, roof. Glumes almost as long as the spikelet.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 220 cm long. Culm-internodes similar in length, distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule a ciliate membrane. Leaf-blades lanceolate, 22–27 cm long, 25–40 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 37 cm long. Primary panicle branches 3–6 cm long. Panicle axis scabrous. Panicle branches scabrous, with scattered hairs. 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, dorsally compressed, 2–2.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface scabrous, rough above. Lower glume

apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, ciliate on margins, acute. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, yellow, 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 West Central, Brazil Southeast. Goias, Minas Gerais, Rio de Janeiro, Espirito Santo.

Panicum shinyangense S.A. Renvoize. *Kew Bull.*, 34(3): 554 (1979).

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

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Steinhauser s.n.*, Aug. 1912, Tanzania: Shinyanga (K).

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths green. Culms 60–100 cm long. Ligule a ciliate membrane. Leaf-blades parallel-sided, 10–15 cm long, 5–6 mm wide. Leaf-blade surface pilose, sparsely hairy. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 20–30 cm long. Primary panicle branches ascending or spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 3–3.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.2 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2.5–3 mm long, indurate, dark brown or black, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Tanzania.

Panicum silvestre L.Fish. *Bothalia* 39 (2): 239 (2009).

Illustrations (Journals): *Bothalia* (39 (2): 239, Fig. 18 (2009)).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Kwazulu-Natal.

Panicum simile Domin. *Biblioth. Bot.* 1 v. 322 (1915).

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: "Queensland: Sandhgel der Dividing Range vstlich von Pentland; Savannenwldder bei Pentland.", *Domin, II. 1910.*

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (319), 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. like. Readily confused with one or more other species.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Butt sheaths pubescent. Basal innovations extravaginal. Culms erect, slender, 20–70 cm long, wiry, 2–4 -noded. Culm-internodes scaberulous, distally glabrous or pilose, with tubercle-based hairs. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-

sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.25 mm long. Leaf-blades flat or involute, 3–15 cm long, 1–3.5 mm wide. Leaf-blade midrib scarcely raised beneath. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–20 cm long, with spikelets clustered towards branch tips. Primary panicle branches spreading, distant, 1-nate, sparsely divided. Panicle branches capillary, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–10 mm long, 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 lanceolate or elliptic, dorsally compressed, acute or acuminate, 2.25–3.5 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, parallel to lemmas or gaping. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, pallid or purple, without keels, 5–7 -veined. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 0.9–1 length of spikelet, membranous, 7 -veined, acute or acuminate. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 2–2.5 mm long, indurate, pallid or yellow or light brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Northern Territory, Queensland, New South Wales, Victoria.

TDWG4. Darwin & Gulf. North, Central, South East, Inland. Coast, Tablelands, Western Slopes.

Panicum simulans L. Smook. *Bothalia*, 23(1): 59 (1993).

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

TYPE from Namibia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Namibia: 1915 (tjihorongong): 25 km N of Outjo on road to Okaukuejo, (-DD),, *Smook 5108* (HT: PRE).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. simulo, resemble. Resembling another species, usually in the same genus.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms 60–120 cm long, without nodal roots or rooting from lower nodes. Culm-nodes pubescent. Leaf-sheaths longer than adjacent culm internode, glabrous on surface or hirsute, with tubercle-based hairs. Ligule a ciliate membrane, 1.4 mm long. Leaf-blade base simple or cordate. Leaf-blades linear or lanceolate, 1–25 cm long, 2–15 mm wide. Leaf-blade surface papillose, rough adaxially. Leaf-blade margins smooth to scabrous. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, obovate, 8–40 cm long. Primary panicle branches ascending or spreading, 1-nate. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. 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 obovate, dorsally compressed, acute or acuminate, 2.6–3 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.33–0.5 length of spikelet, membranous, without keels, 1(–3) -veined. Lower glume primary vein smooth or scaberulous. Lower glume lateral veins absent or prominent. Lower glume apex acute or acuminate. Upper glume ovate, 2.4–3 mm long, 1 length of spikelet, membranous, pallid or purple, without keels, 7–9(–11) -veined. Upper glume hairs 2 mm long or 3 mm long. Upper glume apex acute or acuminate, mucronate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.2–2.3 mm long, membranous, much thinner on margins, pallid or purple, (7–)9 -veined, without cross-veins or with cross-veins, scaberulous, rough on midvein, truncate or acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.4–1.7 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Namibia.

Panicum smithii M.M. Rahman. *Blumea*, 34(1): 173 (1989).

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

TYPE from Vietnam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: North Vietnam, Tonkin, 25 Jan. 1886, *Balansa 468* (HT: L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Philip Morgans Smith (1941–2004) English-born Scottish botanist and educator.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Stolons present. Culms erect or geniculately ascending, slender, 15–35 cm long, 1–2 mm diam., without nodal roots or rooting from lower nodes. Culm-nodes glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, lacerate. Leaf-blades 4–8 cm long, 3–5 mm wide. Leaf-blade midrib indistinct. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, effuse, 5–15 cm long. Primary panicle branches 7–10 in number, spreading, 3–7 cm long. Panicle axis scaberulous. Panicle branches capillary, scaberulous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. 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, acute, 2–2.3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, membranous, without keels, 5 -veined. Lower glume margins ciliolate. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose, hairy above. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 5 -veined, pilose, hairy above, acute. Fertile lemma elliptic or obovate, dorsally compressed, 2 mm long, indurate, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.75 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

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

Panicum socotranum T.A. Cope. *Kew Bull.*, 39(4): 835 (1984).

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

TYPE from Socotra. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Socotra, Jebel Rughid: Radcliffe-Smith & Lavranos 617 (K holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -anum, indicating location. From Socotra, a Yemeni island in the Gulf of Aden.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms erect or geniculately ascending, 15–30 cm long. Lateral branches lacking. Leaves distichous. Leaf-sheaths without keel, glabrous on surface. Ligule a fringe of hairs. Leaf-blades flat or involute, 2.5–4.5 cm long, 1.5–2.5 mm wide, stiff. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 4.5–5.5 cm long, 3–6.5 cm wide. Primary panicle branches whorled at lower nodes. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, flexuous, 2–4 length of fertile spikelet.

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, obtuse, 6 mm long, falling entire.

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

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

Flower and Fruit. Anthers 3, 1.2 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa. Socotra.

Panicum sparsicomum Nees ex Steud. *Syn. Pl. Gram.* 83. (1854).

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 Sri Lanka. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: "Ins. Ceylon", "in T notes on type, no spikelets".

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. sparsus*, few or scattered; como, hair of head. Spikelets few and distant on the panicle.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms rambling, 50–150 cm long (long), rooting from lower nodes. Culm-internodes distally pubescent. Culm-nodes pubescent. Lateral branches ample. Leaf-sheaths without keel, pubescent, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliate membrane, 0.2–0.4 mm long. Collar pubescent. Leaf-blade base broadly rounded or cordate, asymmetrical. Leaf-blades lanceolate, 2.5–9 cm long, 5–11 mm wide. Leaf-blade surface puberulous to hirsute. Leaf-blade margins scaberulous, ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–17 cm long. Primary panicle branches spreading. Panicle branches smooth or scabrous, pubescent 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 elliptic, laterally compressed, compressed slightly, gibbous, acute, 1.5–1.9 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.7–0.9 mm long, 0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1.2–1.5 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 5 -veined. Upper glume lateral veins prominent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, prominently veined, acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.3–1.6 mm long, indurate, yellow or light green, shiny, without keel. Lemma surface punctate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.7–0.9 mm long. Caryopsis with adherent pericarp, ellipsoid, 0.9 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India, Sri Lanka.

TDWG4. Tamilnadu.

Panicum spergulifolium A.Camus. *Bull. Soc. Bot. France* 72: 619 (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *Perrier de la Bathie 14334*, Madagascar centr.: massif d'Andringitra, 2200–2500 m (P). ST: *Perrier de la Bathie 14413*, Madagascar centr.: massif d'Andringitra, 220–2500 m (P). ST: *Perrier de la Bathie 14551*, Madagascar centr.: massif d'Andringitra, 2200–2500 m (P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. folium*, leaf. Leaf-blades resembling those of *Spergula*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Stolons present. Culms erect, 20–25 cm long. Lateral branches ample. Leaves cauline, distichous. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane. Leaf-blades erect, flat or involute, 1–3 cm long, 1.5 mm wide, yellowish green. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade margins ciliate. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 3–6 cm long, 2–5 cm wide. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 9–12 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, obtuse, 3.5–3.8 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.8–2 mm long, 0.5 length of spikelet, membranous, purple, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 2.4–2.7 mm long, 1 length of spikelet, membranous, purple, without keels, 5 -veined. Upper glume surface puberulous, hairy at apex. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, purple, 7 -veined, puberulous, hairy at apex, obtuse. Fertile lemma oblong or ovate, dorsally compressed, 3.5 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 2.5 mm long.

Distribution (TDWG), Continent. Africa.

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

Panicum sphaerocarpon Ell. *Sketch*, i. 125 (1816).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *W. Baldwin s.n.*, Apr, USA: Georgia (CHARL; IT: US-81121 (fragm. ex CHARL & photo)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (288, Fig. 270).

Derivation (Clifford & Bostock 2007): Gk *sphaera*, ball; *karpos*, fruit. Spikelets almost circular in outline.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending or decumbent, 20–80 cm long. Culm-nodes glabrous or pubescent. Lateral branches sparse. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a fringe of hairs or absent, 0–0.7 mm long. Leaf-blade base cordate. Leaf-blades lanceolate, 3–6.5 cm long, 7–14 mm wide, light green. Leaf-blade surface glabrous. Leaf-blade margins tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Peduncle 4–13 cm long. Panicle open, ovate or pyramidal, 8–15 cm long. Panicle axis glabrous. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or orbicular or obovate, with obtuse base, dorsally compressed, obtuse, 1.4–2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.4–0.7 mm long, 0.2–0.33 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface glabrous or puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 7 -veined, glabrous or puberulous, obtuse. Fertile lemma oblong or orbicular or obovate, dorsally compressed, 1.4–2 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.4 mm long. Caryopsis with adherent pericarp, ellipsoid, 1 mm long.

$N = 9$ (1 ref TROPICOS). $2n = 18$ (1 ref TROPICOS).

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

Country /Province /State. New Zealand. New Zealand North I. Eastern Canada, North-central USA, Northeast USA, South-central USA, Southeastern USA, and Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, and Northern South America. Cuba.

TDWG4. Mexico State, Puebla. Chihuahua, Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Jalisco, Michoacan, Oaxaca. Chiapas.

Panicum spongiosum Stapf. Prain, *Fl. Trop. Afr.* ix. 661 (1920).

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: T: *H. Vanderyst* 4322, no date, Zaire: Bas-zaire (US-1445188).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. spongy. Spikelets somewhat turgid.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms 40–200 cm long, spongy. Ligule a fringe of hairs. Leaf-blades 15–35 cm long, 2–3 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 15–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9 -veined, obtuse. Fertile lemma oblong, dorsally compressed, 2.5–3 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa, and Southern Africa. DRC.

Panicum stapfianum Fourc. *Trans. Roy. Soc. S. Afr.* xxi. 76 (1932).

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

TYPE from South Africa. **Basionym or Replaced Name:** *Panicum minus* Stapf, *Flora Capensis* 7: 410–411 (1899)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Ecklon & Zeyher 478*, South Africa: Coast Region: Uitenhage Div.; without precise locality ST: *Flanagan 949*, South Africa: Coast Region: Stutterheim Div.: by the Kabousie River near Komgha ST: *Drège s.n.*, South Africa: Central Region: Richmond Div.: Winter Veld, Limon Fontein and Great Tafelberg ST: *Drège s.n.*, South Africa: Western Region: Little Namaqualand, near verlaptraam, by the Orange River ST: *Burke 424*, South Africa: Kalahari Region: Orange Free State: near the Caledon River.

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (336, Fig 293), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Otto Stapf (1857–1933) Austrian-born English botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–90 cm long. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths ribbed. Ligule a ciliate membrane. Leaf-blades flat or involute, 20–40 cm long, 2–5 mm wide. Leaf-blade surface papillose, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–30(–40) cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, obtuse to acuminate, 3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.5 mm long, indurate, yellow or grey, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

N = 9 (1 ref TROPICOS), or 18 (1 ref TROPICOS).

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **South tropical Africa, Southern Africa.** Angola. Namibia, Botswana, Limpopo, North-West, Gauteng, Free State, Lesotho, Northern Cape, Western Cape, Eastern Cape.

Panicum stigmatum Trin. *Gram. Panic.* 194. (1826).

Accepted by: 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: T: (LE-TRIN-0969.02). HT: *Riedel s.n.*, Apr, Brasil: Minas Gerais: ad rip. rivuli Piabanha in Serra dos Organos (LE-TRIN-0969.01; IT: K (photo ex LE), US-974621 (fragm. ex LE)). IT: *L. Riedel 226*, no date, Brazil: Rio de Janeiro (US-97421).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (734, Fig. 154).

Derivation (Clifford & Bostock 2007): *L. stigma*, mark; *-osa*, abundance. Leaf-sheath with very small glands.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms leaning, 50–100 cm long. Culm-internodes elliptical in section, 4–19 cm long, glandular, distally glabrous. Culm-nodes constricted, brown, glabrous or pubescent. Lateral branches ample, arising from lower culm and upper culm. Leaf-sheaths 3–11 cm long, glandular, glabrous on surface or hispid, outer margin hairy. Ligule a ciliate membrane, 1–1.6 mm long. Collar pubescent or pilose. Leaf-blade base broadly rounded or cordate. Leaf-blades lanceolate, 10–22 cm long, 10–22 mm wide, eglandular or glandular. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy adaxially or on both sides. Leaf-blade margins glabrous, ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle 9–34 cm long, glandular, glabrous or pilose above. Panicle open, ovate, effuse, 9–21 cm long, 6–15 cm wide. Panicle axis glabrous or pilose. Panicle branches flexuous, glandular, scaberulous, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, scabrous, bearing a few hairs or ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 2.4–3.2 mm long, 1.1–1.3 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 1.1–1.8 mm long, 0.5–0.75 length of spikelet, membranous, without keels, (1–)3 -veined. Lower glume apex acute. Upper glume elliptic, 2–2.4 mm long, 0.9 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume lateral veins distinct. Upper glume apex acute.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–9 -veined, acute. Palea of lower sterile floret 1 length of lemma, pilose, adorned on flanks. Fertile lemma elliptic, dorsally compressed, 1.9–2.1 mm long, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acuminate. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.7 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.3 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. **Western South America** and **Brazil**. Brazil Southeast, Brazil North, Brazil South.

TDWG4. Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Panicum stipiflorum S.A. Renvoize. *Kew Bull.*, 37(2): 329 (1982).

Accepted by: 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: *R.M. Harley, S.A. Renvoize, C.M. Erskine, C.A. Brighton & B. Pinheiro 17019*, 8 Mar 1974, Brazil: Bahia: Serra do Curral, 16 km NW of Lagoinha, which is 5.5 km SW of Delfino on side road Minas do Mimoso, alt. 950–1000 m, ca. 10°.22S, 41°.20'W, small stream with marsh on white sand, and surrounding cerrado on sandstone rock exposures (CEPEC; IT: K, MO-3705071, NY, US-2955108). PT: *R.M. Harley, S.A. Renvoize, C.M. Erskine, C.A. Brighton & B. Pinheiro 17004*, 8 Mar 1974, Brazil: Bahia: Serra do Curral, 16 km NW of Lagoinha, which is 5.5 km SW of Delfino on side road to Minas do Mimoso, alt. 950–1000 m, ca. 10°.22S, 41°.20'W, small stream with marsh on white sand, and surrounding cerrado on sandstone rock exposures (CEPEC; IPT: K, MO-3663765).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (170, Fig. 62).

Derivation (Clifford & Bostock 2007): *L. stipes*, stalk; *flos*, flower. Glumes separated by a small stipe.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–30 cm long. Culm-internodes terete, distally pubescent. Culm-nodes constricted, pubescent. Lateral branches ample, arising from upper culm. Leaf-sheaths pilose, outer margin hairy. Ligule a ciliate membrane, 0.3 mm long. Leaf-blade base amplexicaul. Leaf-

blades lanceolate or oblong, 2–6 cm long, 6–15 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins cartilaginous, scabrous, tuberculate-ciliate.

Inflorescence. Inflorescence a panicle. Peduncle 10–20 cm long, glabrous. Panicle open, ovate, effuse, 3–8 cm long, 2–5 cm wide. Panicle axis pilose. Panicle branches eglandular, pilose, pubescent in axils. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, 0.6–2 mm long, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.2–2.6 mm long, 0.9 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, not clasping, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 1.8–2.1 mm long, 0.8 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, acute. Palea of lower sterile floret 1.5 mm long. Fertile lemma elliptic, dorsally compressed, 1.7–1.8 mm long, 0.7 mm wide, indurate, shiny, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex apiculate, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 1.5 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Panicum stramineum Hitchcock & Chase. *Contrib. U. S. Nat. Herb.* xv. 67 (1910).

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: HT: *E. Palmer 206*, Nov 1887, Mexico: Sonora: Guaymas (US-592753; IT: F, NY, SI, US-742139, US-823638, US-823636).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (83: 271, Fig.28 (1996)).

Derivation (Clifford & Bostock 2007): L. straw-yellow. Spikelets and attendant structures straw-colored.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 20–50 cm long. Culm-internodes distally glabrous. Culm-nodes pubescent. Lateral branches sparse. Leaf-sheaths smooth or papillose, glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blade base broadly rounded or cordate. Leaf-blades appressed or erect, 10–30 cm long, 4–15 mm wide. Leaf-blade surface smooth to scabrous, rough adaxially, glabrous. Leaf-blade margins scabrous, glabrous or ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–15 cm long, 0.25–0.33 of culm length. 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, dorsally compressed, compressed slightly, acuminate, 3.2–3.7 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex obtuse or acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic or obovate, dorsally compressed, 2.2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $N = 18$ (1 ref TROPICOS).

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

Country /Province /State. Southwestern USA, Mexico. Northeast Mexico, Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Western South America, Brazil, Southern South America.** Bolivia, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast. Argentina Northwest, Paraguay.

TDWG4. Catamarca, Jujuy, La Rioja, Salta. Cordoba, Formosa. Chihuahua, Durango, Neuvo Leon. Sinaloa, Sonora. Guerrero, Michoacan, Nayarit, Oaxaca. Chiapas.

Panicum subalbidum Kunth. *Rev. Gram.* ii. 397. t. 112 (1831).

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

TYPE from Senegal. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: Leprieur, s.n., Senegal: Walo (P).

Recent Synonyms: *Panicum glabrescens* Steud., *Syn. Pl. Gram.* 71. (1854).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (339, Fig 127), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (200, Fig 83).

Derivation (Clifford & Bostock 2007): L. sub, approaching. Resembling *Panicum albidum*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual or perennial, short-lived. Butt sheaths papery. Culms erect or decumbent, 60–200 cm long, 5–10 mm diam., without nodal roots or rooting from lower nodes. Culm-nodes brown, glabrous. Ligule a ciliate membrane. Leaf-blade base simple or cordate. Leaf-blades parallel-sided or tapering towards tip, 20–50 cm long, 7–15 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 20–50 cm long. Primary panicle branches spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acuminate, 3–3.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.25–0.33 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 2.5–3 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean.** Burkina, Gambia, Ghana, Guinea, Ivory Coast, Mali, Mauritania, Nigeria, Senegal, Sierre Leone. Cameroon, Rwanda, DRC. Chad, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, Gauteng, Mpumalanga, Kwazulu-Natal, Lesotho, Western Cape, Eastern Cape. Madagascar, Reunion.

Panicum subcordatum Swallen non Roth. *Mem. New York Bot. Gard.* 9(3): 258 (1957).

Regarded by K as a synonym (*Panicum granuliferum*).

T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: "Cel. Heynii ... ex India orientali.".

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. sub, approaching; corda, heart; -atum, possessing. Leaf-blade subcordate.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–50 cm long, rooting from lower nodes. Culm-internodes similar in length, distally glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface or pilose. Ligule a ciliate membrane, 0.5 mm long. Leaf-blade base amplexicaul. Leaf-blades lanceolate, 2.5–4.5 cm long, 5–9 mm wide. Leaf-blade surface pilose, hairy adaxially. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–9 cm long. Primary panicle branches ascending. Panicle branches capillary, bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.2 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.5 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume ovate, 0.66–0.75 length of spikelet, membranous, without keels. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, dorsally compressed, 1 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Panicum subflabellatum Stapf. *Prain, Fl. Trop. Afr.* ix. 711 (1920).

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

TYPE from Mozambique. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mozambique Distr. Portuguese East Africa: West Luabo Mouth of the Zambesi,...", *Kirk (May 1858)*.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. sub, approaching. Similar to *Panicum flabellatum*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Rhizomes short. Stolons absent or present. Culms erect or geniculately ascending, 20–50 cm long, wiry. Culm-internodes similar in length. Ligule a ciliate membrane. Leaf-blades appressed or ascending, linear or lanceolate, flat or involute, 3–7 cm long, 2–3 mm wide, stiff, glaucous. Leaf-blade surface glabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 2.5–6 cm long. Primary panicle branches ascending. 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 orbicular, dorsally compressed, obtuse, 1.3–1.7 mm long, falling entire.

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

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, obtuse. Fertile lemma oblong, dorsally compressed, 1.5 mm long, indurate, pallid, dull, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa, Southern Africa. Tanzania. Mozambique. Kwazulu-Natal.

Panicum subhystris A.Camus. *Bull. Soc. Bot. France*, lxxii. 708. (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar centr.: massif de d'Andringitra, *Perrier de la Bathie 14545* (HT: P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. sub, approaching. Similar to *Panicum hystris*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, weak, 7–14 cm long. Culm-internodes distally pilose. Lateral branches sparse. Leaf-sheaths pilose. Ligule a ciliate membrane. Leaf-blades 2–5 cm long, 1–3 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 1–2.5 cm long, bearing few spikelets. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–2 mm long, scaberulous.

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, subacute, 1.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, 1.3–1.4 mm long, 0.9 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface pilose. Lower glume apex acute. Upper glume ovate, 1.5 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose. Upper glume hairs 0.5–0.7 mm long. 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 ovate, dorsally compressed, gibbous, 1 mm long, indurate, pallid, without keel. Lemma surface tuberculate or striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum sublaeve Swallen. *Contrib. U. S. Nat. Herb.* xxix. 424 (1950).

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. **Basionym or Replaced Name:** *Panicum rigidum* Swallen, *Ann. Missouri Bot. Gard.* 30(2): 215 (1943). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H. Pittier* 4526, Oct 1911, Panama: Panamá: Sabana de San Juan Corso, near Chepo (US-679687).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. sub, approaching. Similar to other species with the epithet *laeve* or *laevis*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 15–20 cm long. Lateral branches lacking or sparse. Leaf-sheaths longer than adjacent culm internode, keeled, glabrous on surface. Ligule a ciliate membrane, 1 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 8–10 cm long, 5–10 mm wide. Leaf-blade surface pilose, hairy adaxially, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Panicle open, ovate, 5–8 cm long. Primary panicle branches ascending or spreading. Panicle branches stiff. 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, dorsally compressed, 3.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 1.5 mm long, 0.33–0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 11 -veined, acute. Fertile lemma elliptic, dorsally compressed, 3 mm long, indurate, without keel. Lemma margins involute. Lemma apex acute, pubescent (sparsely). Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. Mesoamerica, Northern South America. Costa Rica, El Salvador, Honduras, Panama. Venezuela. Colima. Chiapas.

Panicum subtilissimum S.A. Renvoize. *Kew Bull.*, 34(3): 552 (1980).

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

TYPE from Ivory Coast. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ivory Coast: Sidié, growing in water, 5 Oct 1960, *Ake Assi 5716* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. very subtle. Culms delicate.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, slender, 30–40 cm long. Ligule an eciliate membrane. Leaf-blades filiform or linear, convolute, 5–20 cm long, 1–2 mm wide. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 6–10 cm long. Primary panicle branches spreading or reflexed, simple. 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 orbicular, dorsally compressed, 1 mm long, breaking up at maturity.

Glumes. Glumes similar, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, membranous, without keels, 1(–3) -veined. Lower glume surface glabrous. Upper glume ovate, 1 length of spikelet, membranous, yellow, without keels, 3–5 -veined. Upper glume surface glabrous.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 5 -veined. Fertile lemma orbicular, dorsally compressed, 1 mm long, chartaceous, pallid, without keel. Lemma surface tuberculate (verruculose). Lemma margins involute. Palea involute, chartaceous. Palea surface tuberculate (verruculose).

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Ivory Coast.

Panicum sucosum

Regarded by K as a synonym (*P. elephantipes*).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 7379, 29 Sep 1910, Mexico: Jalisco: Orosco, near Guadalajara (US-693325; IT: GH, NY, SI).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. succus, juice; -osa, abundance. Culms fleshy.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Butt sheaths spongy. Culms decumbent, 100–150 cm long, 5–7 mm diam., rooting from lower nodes. Leaf-sheaths loose, glabrous on surface. Ligule an eciliate membrane, 1 mm long. Leaf-blades 15–30 cm long, 3–9 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–30 cm long, 10–20 cm wide. Primary panicle branches ascending, 1–2 -nate. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acuminate, 3.3–3.7 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, clasping, 1–1.3 mm long, 0.33 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume lanceolate, 1 length of spikelet, membranous, without keels. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, acuminate. Fertile lemma lanceolate, dorsally compressed, 2.3–2.7 mm long, 0.7 mm wide, indurate, pallid, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex acuminate. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico.

TDWG4. Distrito Federal, Mexico State. Hidalgo. Jalisco.

Panicum sumatrense Roth ex Roem. & Schult. *Syst.* ii. 434 (1817).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Heyne s.n.*, Indonesia: Sumatra (B (photo, K)). LT by ?; cited by Veldkamp et al. in *Blumea* 34: 83 (1989).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 713).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 30–100 cm long. Culm-nodes glabrous. Lateral branches sparse or ample. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane, 0.6–1.1 mm long. Collar glabrous. Leaf-blade base broadly rounded. Leaf-blades 10–40 cm long, 5–15 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, nodding, 5–40 cm long, 1–5 cm wide. Primary panicle branches appressed, 3–15 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret

male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 2.5–3.5 mm long, persistent on plant.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.7–1.2 mm long, 0.25–0.33 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 11–15 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9–13 -veined, acute. Palea of lower sterile floret 0.9 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.2–2.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp, 1.8–1.9 mm long.

N = 18 (1 ref TROPICOS).

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

Country /Province /State. Caucasus, China, Eastern Asia. China South Central, Tibet. Taiwan. **Indian Subcontinent, Indo-China, Malesia.** Bangladesh, India, Sri Lanka. Myanmar, Vietnam. Java, Lesser Sunda Is, Malaya, Philippines, Sulawesi, Sumatra.

TDWG4. Guizhou, Yunnan, Bihar, Kerala, Karnataka. Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamilnadu, Uttar Pradesh, West Bengal. Jammu Kashmir.

***Panicum superatum* Hack. *Oesterr. Bot. Zeitschr.* 1901, 427. (1901).**

Accepted by: 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: *Glaziou 17904*, 7 Mar 1889, Brazil: Rio de Janeiro: Serra dos Orgãos (W; IT: P, US-974676 (fragm. ex W), US-1280065, US-1715312 (fragm. ex B)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (720, Fig. 152).

Derivation (Clifford & Bostock 2007): *L. supero*, overtop. Inflorescence projecting conspicuously at anthesis.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect or geniculately ascending, 20–120 cm long. Culm-internodes thin-walled, 4–6 cm long, distally glabrous or hispid. Culm-nodes constricted, glabrous or bearded. Lateral branches sparse, arising from lower culm or upper culm. Leaf-sheaths 4–10 cm long, striately veined, glabrous on surface or hirsute, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.6–1.5 mm long. Collar glabrous or pubescent. Leaf-blade base broadly rounded or cordate. Leaf-blades lanceolate, 4.5–16 cm long, 6–15 mm wide. Leaf-blade surface glabrous or hispid. Leaf-blade margins ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle hirsute above. Panicle contracted, linear or lanceolate, 5–8 cm long, 0.8–5 cm wide. Primary panicle branches appressed. Panicle axis hispid. Panicle branches eglandular, pubescent, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flexuous, scabrous, villous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, 2.4–3.3 mm long, 0.9–1.2 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 1.6–2.4 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume surface glabrous to pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7–8 -veined, glabrous or pubescent, obtuse. Palea of lower sterile floret 0.2 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.9–2.5 mm long, 0.9–1.1 mm wide, indurate, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex apiculate, scabrous. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.3–1 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.7 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

TDWG4. Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Panicum tamaulipense F.R. Waller & C.W. Morden. *Syst. Bot.*, 8(2): 221 (1983).

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 Mexico. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *F.M. Martínez & G.B. Luyando F-2161*, 26 Sep 1956, Mexico: Tamaulipas: Sierra de Tamaulipas, between La Chona and Río Santa Olaya, alt. 50 m (LL; IT: US-2463101).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Tamaulipas State, Mexico.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–1550 cm long. Culm-internodes distally glabrous or hispid, with tubercle-based hairs. Leaf-sheaths glabrous on surface or hispid, with tubercle-based hairs. Ligule a fringe of hairs, 0.8 mm long. Leaf-blades erect or spreading, flat or conduplicate, 10–50 cm long, 3–8 mm wide, glaucous. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 15–40 cm long, with spikelets clustered towards branch tips. Primary panicle branches ascending, 1–3 -nate. Panicle branches stiff. Spikelets appressed, 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, dorsally compressed, acuminate, 1.8–2.2 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7–9 -veined, acute. Fertile lemma elliptic, dorsally compressed, 1.5–1.7 mm long, 0.6–0.8 mm wide, indurate, dark brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Northeast Mexico.

TDWG4. San Luis Potosi, Tamaulipas.

Panicum tenuifolium Hook. & Arn. *Bot. Beech. Voy.* 100 (1841).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Hawaii. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *F.W. Beechey s.n.*, no date, Hawaii: Oahu I., Honolulu Co. (US-81293 (fragm.)).

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms 35–120 cm long. Culm-internodes distally pilose, with tubercle-based hairs. Culm-nodes glabrous or bearded. Lateral branches lacking. Leaves cauline. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.3–1.1 mm long. Leaf-blades flat or involute, 5–20 cm long, 1–5(–7) mm wide. Leaf-blade surface glabrous or pilose, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–30 cm long. Primary panicle branches ascending or spreading, 1 -nate. Panicle branches scabrous, glabrous or pilose, pubescent in axils or 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 elliptic, dorsally compressed, acute or acuminate, 2.1–3.6 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acute or acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, acute. Palea of lower sterile floret 0.33–0.5 length of lemma. Fertile lemma lanceolate or elliptic, dorsally compressed, 1.7–1.8 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1–1.2 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum torridum Gaudich. *Frey. Voy. Bot.* 411. (1830).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Sandwich Islands. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Insulis Sandwichensis,.

Illustrations (Books): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1572, Pl. 233).

Derivation (Clifford & Bostock 2007): *L. torrid* zone. From Hawaii.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 20–60 cm long. Culm-internodes distally pubescent or hirsute. Leaf-sheaths pubescent or hirsute. Ligule a ciliate membrane, 1 mm long. Leaf-blades 10–20 cm long, 4–10 mm wide. Leaf-blade surface pubescent or hirsute.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or oblong, dense, 3–15 cm long, 1–4 cm wide. Primary panicle branches ascending, bearing spikelets almost to the base. Panicle axis villous. Panicle branches villous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, villous.

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

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.9 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume surface villous. Lower glume hairs 2–3 mm long. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface villous. Upper glume hairs 2–3 mm long. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, glabrous or villous, hairy above, acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum trachyrhachis Benth. *Fl. Austral.* vii. 490. (1878).

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), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*.

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Elsey s.n.*, Australia: Port Darwin LT: *Schultz 343*, Australia: Port Darwin (K). LT designated by Veldkamp, *Blumea* 41: 207 (1996). ST: *M'Kinlay s.n.*, Australia: Arnhem's Land.

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): *Gk. trachys*, rough; *rhachis*, backbone. Panicle axes scabrous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 60–180 cm long, 3–6 -noded. Culm-nodes glabrous. Leaf-sheaths smooth, glabrous on surface or pilose, outer margin glabrous. Ligule a ciliate membrane, 1.2–3 mm long. Leaf-blades flat or involute, 12–45 cm long, 3–7 mm wide. Leaf-blade surface smooth or scabrous, glabrous. Leaf-blade margins smooth.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 30–65 cm long. Primary panicle branches spreading, whorled at lower nodes, 15–30 cm long, bearing 40–100 fertile spikelets on each lower branch. Panicle axis scabrous. Panicle branches scabrous, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.8–2.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, compressed slightly, 3.1–3.9 mm long, 1–1.1 mm wide, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.3–0.4 mm long.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2.1–2.9 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume lateral veins thickened. Lower glume apex acute or acuminate, awned, 1 -awned, awn 0.8–1.2 mm long. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume inner surface pubescent (at tip). Upper glume apex acute, mucicous or awned, 1 -awned, awn 0–1 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 9 -veined, acute or acuminate, mucronate. Fertile lemma elliptic, dorsally compressed, 2.1–2.4 mm long, indurate, without keel. Lemma lateral veins distinct. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.1–1.4 mm long. Caryopsis with adherent pericarp.

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

Country /Province /State. **Indo-China, Malesia, Papuasia.** Thailand, Vietnam. Lesser Sunda Is. New Guinea West Papua (Irian Jaya). New Guinea. **Australia.** Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley. Darwin & Gulf, Victoria R & Barkly Tableland. North, Central.

***Panicum trichidiachne* Doell. *Mart. Fl. Bras.* ii. II. 339. (1877).**

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: *A.F.M. Glaziou 6979*, 4 Jan 1875, Brazil: Rio de Janeiro (P; IT: US-81150 (fragm. ex P, B)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (271, Fig. 237 as *P.schiffneri*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (315, Fig. 92), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 33, Fig. 2 (2006)).

Illustrations (Journals): *Darwiniana* (22: 38, Fig.9 (1979)).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent, 30–60 cm long, rooting from lower nodes. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane. Leaf-blades lanceolate, 10–15 cm long, 14–17 mm wide. Leaf-blade surface pubescent, hairy abaxially.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 10–16 cm long, contracted about secondary branches. 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, subacute, 1.5–1.75 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface pubescent, hairy all along. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate. Palea surface pubescent.

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

Country /Province /State. **Southwestern USA, Southeastern USA, Mexico.** Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Virginia. Central Mexico, Northeast Mexico, Gulf (Mexico), Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Dominican Republic, Haiti, Windward Islands, Puerto Rico. Venezuela. Colombia. Brazil Southeast, Brazil South. Paraguay.

TDWG4. Minas Gerais, Rio de Janeiro, Espirito Santo. Misiones. Puebla. Hidalgo, Queretaro, San Luis Potosi. Veracruz. Chiapas.

***Panicum trichocladum* K. Schum. *P.O.A. C.* 103 (1895).**

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, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *H. Meyer 140*, no date, Tanzania: Kilimanjaro (B, US-81151 (fragm. ex B)).

ST: *Volkens 69*, Tanzania: Usambara (B, US-81151 (fragm. ex B)).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (339, Fig. 127), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (208, Fig. 86), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (105, Fig. 103).

Derivation (Clifford & Bostock 2007): Gk. thrix, hair; klados, stem. Culms hairy.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Rhizomes short, knotty. Culms rambling, 20–250 cm long, rooting from lower nodes. Leaf-sheaths wider than blade at the collar or as wide as blade at the collar or narrower than blade at the collar. Ligule a ciliate membrane, 2 mm long. Leaf-blades lanceolate, 5–15(–18) cm long, 4–18 mm wide. Leaf-blade surface pilose. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle pilose above. Panicle open, ovate, 6–20 cm long. Panicle branches glabrous (rarely) or pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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 oblong, dorsally compressed, obtuse, (2.2–)2.5–3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.1–0.25 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. 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 or 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 2.2–3 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2 mm long.

N = 16 (1 ref TROPICOS).

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

Country /Province /State. West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Western Indian ocean. Rwanda, DRC. Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania, Uganda. Malawi, Mozambique, Zambia, Zimbabwe. Madagascar. **Malesia.** Malaya, Singapore. **Northern South America.** Surinam.

TDWG4.

Panicum tricholaenoides Steud. *Syn. Pl. Gram.* 68 (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 Uruguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ex. Herbo. Deloche lectum in Montevideo,

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (396, Fig. 84), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (207, Fig. 162), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (675, Fig. 143), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (297, Fig. 117), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (317, Fig. 93), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (336, Fig. 142).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. The spikelets with their densely hairy glumes and sterile lemmas resemble those of *Tricholaena*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms robust, 150–200 cm long. Culm-internodes terete, thin-walled. Lateral branches ample. Leaf-sheaths 8–15 cm long, outer margin hairy. Ligule a ciliate membrane, 1.5 mm long. Leaf-blades involute or convolute, 25–35 cm long, 7 mm wide. Leaf-blade surface glabrous to pubescent, sparsely hairy. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, nodding, 30–40 cm long. Primary panicle branches profusely divided. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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 ovate, dorsally compressed, 2.3–3 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 1.5–2.1 mm long, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -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, 1.5–2 mm long, 1.5 mm wide, indurate, pallid, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins distinct. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 1 mm long. Caryopsis with adherent pericarp, ovoid, yellow. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

TDWG4. Amazonas, Acre, Rondonia, Goias, Minas Gerais, Rio de Janeiro, Espirito Santo, Catarina, Rio Grande do Sul. Buenos Aires, Chaco, Corrientes, Entre Rios, Misiones, Santa Fe.

Panicum trichonode Launert & Renvoize. *Prodr. Fl. Sudwestafr., Lief.* 34, 160. *Gramin.*, 226, 143 (1970).

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: Zambia: 80 km W of Chingola, 18 Jul 1963, *E.A. Robinson 6124* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. thrix, hair; L. nodus, knot. Nodes hairy.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths pubescent. Culms erect or geniculately ascending, 35–120 cm long. Culm-nodes pubescent or bearded. Leaves cauline. Ligule a ciliate membrane. Leaf-blades 20–30 cm long, 3–5 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or oblong, 10–22 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.1–0.25 length of spikelet, membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, herbaceous, without keels, 7–9 -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, herbaceous, 7–9 -veined, acute. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Zambia, Zimbabwe. Namibia, Botswana.

Panicum tsaratananense A. Camus. *Bull. Soc. Bot. France*, 77: 638 (1931).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Mt Tsaratanana: Perrier 16369.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose, clumped densely. Culms erect or geniculately ascending, 5–20 cm long. Culm-internodes distally glabrous. Lateral branches ample. Leaf-sheaths loose, striately veined, glabrous on surface or pilose. Ligule a ciliate membrane. Leaf-blades lanceolate, 1.5–2.5 cm long, 1–2.5 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, linear, loose, 0.5–1.5 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2.5–4 mm long, ciliate, with 2–2.5 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.4–1.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25 length of spikelet, membranous, without keels. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined. Fertile lemma oblong, dorsally compressed, 1.3–1.4 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum tuerckheimii

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

TYPE from Guatemala. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H. von Tuerckheim II 820 [8618]*, 1903, Guatemala: Alta Verapaz: Cubilquitz im Hochwald (W; IT: NY-232347 (fragm.), US-81303 (fragm. ex W), US-973891, US-973890).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Hans von Tuerckheim (1853–1920) German botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms erect or geniculately ascending, 30–50 cm long. Culm-internodes elliptical in section, distally glabrous. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths keeled, glabrous on surface. Ligule a ciliate membrane, 0.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 10–25 cm long, 20–25 mm wide. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 15–20 cm long. Primary panicle branches ascending, 5–10 cm long. Panicle axis glabrous. Panicle branches glabrous, pubescent 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 lanceolate, dorsally compressed, acuminate, 2.5–3 mm long, 0.9 mm wide, falling entire.

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

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

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

Country /Province /State. Mexico. Central Mexico, Gulf (Mexico), Southeast Mexico. Mesoamerica. Belize, Guatemala.

Puebla. Veracruz. Chiapas.

Panicum turgidum Forsk. *Fl. Aegypt. Arab.* 18. (1775).

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 Egypt. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Forsskal s.n.*, 1761–1762, Egypt: Cairo, Kahirini desert (C (3 sheets)).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (256, Fig. 187), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 403), L.Boulos, *Flora of Egypt* 4 (2005) (288, Pl. 85), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (221, Fig. 125), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (491, Pl. 188), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982) (168, Fig. 17), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (21, Fig. 10), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:89(1980)).

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

Derivation (Clifford & Bostock 2007): L. swollen. With swollen spikelets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Culms 40–100(–200) cm long, 1–6 mm diam., woody. Culm-internodes solid, glaucous. Lateral branches suffrutescent. Ligule a ciliate membrane. Leaf-blades deciduous at the ligule, (0.5–)2–15 cm long, 1–6 mm wide, coriaceous, stiff, glaucous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 2.5–15(–30) cm long, contracted about primary branches. Primary panicle branches spreading, distant, 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 ovate, dorsally compressed, compressed slightly, acute or acuminate, (3.1–)3.4–4.5(–5) mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.75–1 length of spikelet, membranous, without keels, 5–9 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -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, 9–11 -veined, acute. Fertile lemma oblong, dorsally compressed, 3 mm long, indurate, pallid or yellow, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2 mm long.

$N = 9$ (1 ref TROPICOS). $2n = 36$ (1 ref TROPICOS).

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

Country /Province /State. Northern Africa, West tropical Africa, Northeast tropical Africa. Algeria, Egypt, Libya, Morocco, Tunisia. Mali, Mauritania, Niger, Senegal. Chad, Eritrea, Ethiopia (inc. Eritrea), Socotra, Somalia, Sudan. **Western Asia, Arabian Peninsula.** Cyprus, Iran, Iraq, Palestine, Israel & Jordan. Gulf States, Kuwait, Oman, Saudi Arabia. **Indian Subcontinent.** Pakistan.

TDWG4. Gujarat, Kerala. Rajasthan.

Panicum urvilleanum Kunth. *Rev. Gram.* i. 35 (1829).

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: *D'Urville s.n.*, 1815, Chile: Conception de Chili (B; IT: US (fragm. ex B, P)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (476), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (533, Fig 360), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (22, Fig. 11).

Illustrations (Journals): *Darwiniana* (22: 25, Fig.6a-d (1979)).

Derivation (Clifford & Bostock 2007): in honor of Jules Sibastien Cisar Dumort d'Urville (1790–1842), French Naval Officer and botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes elongated. Culms erect, 50–100 cm long. Culm-nodes bearded. Leaf-sheaths hirsute, with reflexed hairs. Ligule a ciliolate membrane. Leaf-blades tapering towards tip, 10–20 cm long, 4–7 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 25–30 cm long. Primary panicle branches ascending. 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, 6–7 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.66–1 length of spikelet, membranous, without keels, 7–9 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume surface villous. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, villous, acute. Fertile lemma elliptic, dorsally compressed, 4–5 mm long, indurate, without keel. Lemma margins involute, ciliate. Lemma apex acute. Palea involute, indurate.

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

Country /Province /State. Southwestern USA, Mexico. Arizona, California, Nevada. Northwest Mexico. **Western South America, Southern South America.** Peru. Argentina Northwest, Argentina Northeast, Argentina South, Chile Central, Chile South.

TDWG4. Catamarca, La Rioja, Mendoza, Salta, San Juan, San Luis, Tucuman. Buenos Aires, Cordoba, La Pampa. Chubut, Neuquén, Río Negro. Biobio, La Araucania. Los Lagos. Baja California, Sonora.

Panicum validum Mez. *Engl. Jahrb. lvi. Beibl.* 125, 4 (1921).

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

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Lorentz Entrer. 1745*, Argentina: Entre Ríos ST: *Lorentz 840*, Sep 1876, Argentina: Concepción del Uruguay, Arroyo de La China (B; IST: BAA-1988 (fragm. ex B), BAF, CORD, US). ST: *Niederlein 200*, Argentina.

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (623, Fig. 135), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (293, Fig. 114), B.Rosengurt, *Gramineas Uruguayas I* (1970) (330, Fig. 139).

Illustrations (Journals): *Systematic Botany* (14: 224, Fig.3 (1989)).

Derivation (Clifford & Bostock 2007): L. robust. Culms erect, stout.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Culms robust, 30–150 cm long, 2.5–3.5 mm diam. Culm-internodes elliptical in section, thick-walled, 14.5–26.5 cm long, striate. Culm-nodes purple, glabrous. Leaf-sheaths 13–33 cm long, keeled. Ligule an eciliate membrane, 0.5–0.7 mm long. Leaf-blades 37–90 cm long, 9–11 mm wide. Leaf-blade midrib widened, keeled beneath. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or oblong, 17–30 cm long. Primary panicle branches 20 in number, simple. Panicle branches pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3–3.5 mm long, 1.3–2 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2–2.5 mm long, 0.66 length of spikelet, membranous, without keels, 1–5 -veined. Lower glume primary vein scaberulous. Lower glume apex acute, mucicous or mucronate. Upper glume oblong, 1 length of spikelet, membranous, without keels, 5–7 -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. Palea of lower sterile floret 1–2 mm long. Fertile lemma lanceolate, dorsally compressed, 3–3.4 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 0.5–1 mm long.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

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

TDWG4. Catarina, Rio Grande do Sul. Entre Rios.

Panicum vaseyanum Scribn. ex Beal. *Grasses N. Amer.* ii. 140 (1896).

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: HT: *C.G. Pringle 1415*, 30 Sep 1887, Mexico: Chihuahua: wet, pine plains, base of Sierra Madre (US-2808932; IT: MO-1837615, US-823847, US-742045).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of George Vasey (1822–1893) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent, 50–70 cm long, rooting from lower nodes. Leaf-sheaths inflated. Ligule a ciliolate membrane, 1–2 mm long. Leaf-blades 5–10 cm long, 3–8 mm wide.

Inflorescence. Inflorescence a panicle, terminal and axillary, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Panicle open, lanceolate, 4–7 cm long, 1 cm wide. Primary panicle branches ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 3–4 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, subacute, 2–2.6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.4–0.8 mm long, 0.25–0.33 length of spikelet, membranous, without keels. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, dorsally compressed, 2–2.6 mm long, indurate, pallid or light green or light brown, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico, Southeast Mexico.

TDWG4. Distrito Federal, Mexico State. Aguascalientes, Chihuahua, Guanajuato, Queretaro. Guerrero, Jalisco, Michoacan. Chiapas.

Panicum vatovae Chiov.apud Chiarugi. *Webbia*, viii. 74. (1951).

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

TYPE from Ethiopia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ethiopia, Neghelle: Vatova 201 (FT holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of A. Vatova who collected in Eritrea.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms geniculately ascending, slender, 50–70 cm long, wiry. Lateral branches fastigiata. Leaf-sheaths pubescent. Ligule a ciliate membrane. Leaf-blades spreading or reflexed, deciduous at the ligule, linear or lanceolate, 3–10 cm long, 5–8 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 3–8 cm long. Primary panicle branches simple. 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, obtuse, 3–3.8 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or oblong, 1 length of spikelet, membranous, dark green, without keels, 3(–5) -veined. Lower glume lateral veins ribbed. Lower glume surface pubescent. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, membranous, dark green, without keels, 7(–9) -veined. Upper glume lateral veins ribbed. Upper glume surface pubescent. 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, 7 -veined, acute. Fertile lemma oblong, dorsally compressed, 3–3.8 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa. Ethiopia (inc. Eritrea).

Panicum venezuelae Hack. *Oesterr. Bot. Zeitschr.* li. 368. (1901).

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: IT: *Eggers 13471*, no date, Venezuela (US (fragm. ex W)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (274, Fig. 242), S.A.Renvoize, *The Grasses of Bahia*, 1984.

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (75: 453, Fig.15 (1988)).

Images: *Syst. Bot.*34: 687, Fig.2 (2009).

Derivation (Clifford & Bostock 2007): from Venezuela.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms decumbent or prostrate, slender, 10–15 cm long. Culm-nodes pubescent. Leaf-sheaths pubescent. Ligule a ciliate membrane. Leaf-blades lanceolate, 3–7 cm long, 3–6 mm wide. Leaf-blade surface pubescent, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, borne along a central axis, unilateral, 0.4–0.6 cm long, bearing 1–8 fertile spikelets on each. Central inflorescence axis 3–5 cm long, pubescent. Rhachis pubescent on surface. Spikelet packing crowded. Spikelets in pairs. 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, obtuse, 2.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 5 -veined. Lower glume surface pubescent. Lower glume apex acute. Upper glume oblong, gibbous, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, acute. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, indurate, 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. Mesoamerica, Caribbean, Northern South America, Brazil. Guatemala, Honduras. Cuba, Dominican Republic. Venezuela. Brazil Northeast.

TDWG4. Bahia, Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe.

***Panicum virgatum* L. *Sp. Pl.* 59. (1753).**

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), N.Tsvelev, *Grasses of the Soviet Union* (1983).

TYPE from USA. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: Clayton 578, USA: Virginia (BM; ILT: US (fragm. ex BM)). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 118 (1908).

Illustrations (Books): K.F.Best, et al, *Prairie Grasses* (1971) (171), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (476), F.W.Gould, *The Grasses of Texas* (1975) (455, Fig. 242), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (262, Fig. 217), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 712), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:90(1980)).

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

Derivation (Clifford & Bostock 2007): *L. virga*, broom; -ata, possessing. Inflorescence arms or culms held erect.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated, scaly. Culms 60–300 cm long. Culm-nodes glabrous or bearded. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane, 1.5–3 mm long. Leaf-blades 10–60 cm long, 3–15 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–55 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3–5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.66–0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acuminate. Fertile lemma ovate, dorsally compressed, 2.5–3.5 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

2n = 36 (2 refs TROPICOS).

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Middle Asia, China** (+). Tadjikistan. **North-central Pacific.** Hawaii (*). **Western Canada, Eastern Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Manitoba. Nova Scotia, Ontario, Quebec. Colorado, Montana, Wyoming. Illinois, Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Arizona, Nevada, Utah. New Mexico, Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Brazil.** Bermuda, Cuba. Brazil North.

TDWG4. Bihar. Mexico State, Morelos, Puebla. Coahuila, Chihuahua, Tamaulipas, Zacatecas. Veracruz. Baja California, Sonora. Colima, Jalisco, Michoacan, Oaxaca. Chiapas, Quintana Roo, Tabasco.

Panicum voeltzkowii Mez. *Engl. Jahrb.* lvii. 187 (1921).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Veeltzkow 321*, Madagascar ST: *Boivin 2266*, Madagascar.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Alfred Voeltzkow (1860–1946) German botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose. Stolons absent. Culms erect, 10–35 cm long. Lateral branches lacking or sparse. Ligule a fringe of hairs. Leaf-blades 3–9 cm long, 2–5 mm wide. Leaf-blade surface glabrous or pubescent, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 2.5–6 cm long. Primary panicle branches ascending, 1–2 -nate. Panicle branches capillary, glabrous. 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 orbicular, dorsally compressed, obtuse, 1.3–1.7 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume 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, 1.2–1.3 mm long, indurate, shiny, without keel, more than 3-veined. Lemma margins convolute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. **Western Indian ocean.** Aldabra, Madagascar, Seychelles.

Panicum vohitrense A. Camus. *Bull. Soc. Bot. France*, 92: 51 (1945).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Vohitra: Perrier 14014.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 20–25 cm long, rooting from lower nodes. Culm-nodes pubescent. Leaf-sheaths striately veined, pilose, outer margin hairy. Leaf-sheath auricles erect. Ligule a ciliolate membrane. Leaf-blades lanceolate, 2.5–4.5 cm long, 8–10 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, loose, 5–8 cm long. Primary panicle branches appressed, 3 cm long. Panicle axis glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 5–7 mm long, glabrous, tip widened.

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, 1.6–1.8 mm long, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.6–0.7 mm long, 0.33 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 1.4 mm long, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong or ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 1.3–1.4 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

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

Panicum vollesenii S.A. Renvoize. *Kew Bull.*, 35(1): 202 (1980).

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: IT: *K. Vollesen 3871*, 3 Aug 1976, Tanzania: Southern, Selous game reserva, Kingupira, 125 m (C, EA, K, WAG).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Kaj B. Vollesen (1946-) Danish botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial. Culms rambling, 100–150 cm long, wiry. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades spreading, lanceolate, 4.5–9 cm long, 5–7 mm wide, stiff, glaucous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 9–14 cm long. Primary panicle branches spreading. Panicle branches stiff, pilose (sparsely on axis). 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, obtuse, 2.8–3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, dorsally compressed, 2.8–3 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface reticulate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Tanzania.

Panicum volutans J. G. Anders. *Bothalia*, vii. 42 (1960).

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

TYPE from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: South Africa, Ventersdorp district: Louw 1713 (PRE holo).

Illustrations (Books): No illustration found (BKS).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): *L. voluto*, tumble about. The mature panicle breaks off a unit and in windy weather tumbles along the ground.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect or geniculately ascending, 50–75 cm long, without nodal roots or rooting from lower nodes. Ligule a ciliate membrane. Leaf-blades 10–25 cm long, 5–10 mm wide. Leaf-blade surface hispid, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, obovate, effuse, 20–30 cm long, with spikelets clustered towards branch tips. Primary panicle branches ascending. Panicle branches stiff. 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, dorsally compressed, acuminate, (5.5–)6–6.5(–7) mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 0.75 length of spikelet, membranous, 7 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2.5–3 mm long, indurate, grey, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Limpopo, North-West, Gauteng, Mpumalanga, Kwazulu-Natal.

Panicum wiehei S.A. Renvoize. *Kew Bull.*, 34(3): 554 (1980).

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

TYPE from Malawi. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Malawi:Dedza Mountain, 27 Mar 1950, *Wiehe N/469* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Paul Octavo Wiehe (-1975) who collected in Malawi.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms decumbent or rambling, 30–100 cm long, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blade base simple or cordate. Leaf-blades lanceolate, 6–16 cm long, 8–18 mm wide, herbaceous or membranous. Leaf-blade surface glabrous or pilose. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–15 cm long. Primary panicle branches moderately divided or profusely divided. 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, 2–2.5(–3) mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.33 length of spikelet, membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface asperulous. Upper glume apex acute.

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

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa, South tropical Africa. Sudan. Uganda. Malawi, Zambia, Zimbabwe.

Panicum xerophilum (Hillebr.) Hitchcock. *Mem. Bishop Mus., Hono. lulu*, viii. 193 (1922).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from USA. **Basionym or Replaced Name:** *Panicum nephelophilum* var. *xerophilum* Hillebr., *Fl. Hawaiian Isl.* 498 (1888). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: USA: Hawaii: dry, exposed ridges of Oahu

ST: "On dry exposed ridges of ... Lanai"

ST: USA: Hawaii: "on dry exposed ridges of ... Maui"

ST: USA: Hawaii: "on dry exposed ridges of Maalaea."

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual, caespitose. Culms 5–80 cm long. Culm-internodes distally pilose. Culm-nodes bearded. Lateral branches lacking or sparse. Leaves cauline. Leaf-sheaths puberulous or pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.5–2 mm long. Leaf-blades flat, 3–18 cm long, 1–8 mm wide. Leaf-blade surface puberulous or pilose, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or elliptic, 3–25 cm long. Primary panicle branches ascending. Panicle branches scabrous, with scattered hairs or glabrous. 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, dorsally compressed, acute or acuminate, 1.5–3.2(–3.7) mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 0.9 length of spikelet, membranous, 7 -veined, acute. Palea of lower sterile floret 0.25–0.33 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.2–1.7 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.7–1.2 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Panicum zambesiense S.A. Renvoize. *Kew Bull.*, 44(3): 544 (1989).

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

TYPE from Zimbabwe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zimbabwe: Hwange, 1 May 1978, *Gonde* 289 (HT: SRGH; IT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From the Zambesi region of southern tropical Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe PANICINAE .

Habit, Vegetative Morphology. Annual. Culms erect, 25–60 cm long. Ligule a ciliate membrane. Leaf-blade base cordate. Leaf-blades linear or lanceolate, 6–16 cm long, 4–8 mm wide. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 6–18 cm long. Primary panicle branches appressed or ascending. Panicle branches flexible. 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 lanceolate, dorsally compressed, 2.5–3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, acuminate. Fertile lemma oblong, dorsally compressed, 2–2.5 mm long, indurate, dark brown, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia, Zimbabwe.

Panicum bresolinii L.B. Smith & D.C. Wasshausen. *Bradea*, 2(35): 245 (1978).

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: R. Klein & A. Bresolin 7360, 19 Apr 1967, Brazil: Santa Catarina: Morro Costa da Lagoa (US-2536896; IT: FLOR, HBR).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (656, Fig. 140).

Derivation (Clifford & Bostock 2007): in honor of Antnio Bresolin (1919-) Brazilian botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa* .

Habit, Vegetative Morphology. Perennial. Culms decumbent, robust, 85–100 cm long, rooting from lower nodes. Culm-internodes distally glabrous. Culm-nodes bearded. Leaf-sheaths keeled, hirsute, with tubercle-

based hairs, outer margin hairy. Leaf-sheath oral hairs bearded. Ligule a ciliolate membrane. Leaf-blade base cordate. Leaf-blades linear or lanceolate, 13–26 cm long, 20–30 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade margins crenate, scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, effuse, 15–30 cm long, contracted about secondary branches. Primary panicle branches ascending, 1–3-nate. Panicle branches secund. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–3 length of fertile spikelet, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acute, 1.5–2 mm long, falling entire.

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

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5-veined, acute. Fertile lemma elliptic, dorsally compressed, 1.2–1.7 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 South.
Catarina, Rio Grande do Sul.

***Panicum condensatum* Bertol. *Bologn. Opusc. Sc.* 3: 408 (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>: *vide* TROPICOS and Kew Synonymy Database: HT: *G. Raddi s.n.*, Brazil: Rio de Janeiro (BOLO; IT: K, FI (3 sheets), PI, US-80598 (fragm. ex FI, PI & photo)).

Recent Synonyms: *Hymenachne condensata* (Bertol.) Chase, *Journ. Wash. Acad. Sc.* 13: 177 (1923).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (835, Fig. 172 as *Hymenachne condensata*).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (79: 794, Fig.19 (1992)).

Derivation (Clifford & Bostock 2007): *L. condense*, press close together. Spikelets crowded in the inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa*.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms decumbent, 100–160 cm long. Culm-internodes distally glabrous. Culm-nodes constricted, glabrous. Leaves cauline. Leaf-sheaths striately veined. Ligule a fringe of hairs. Leaf-blade base amplexicaul. Leaf-blades erect or ascending, lanceolate, 10–15 cm long, 12–15 mm wide. Leaf-blade midrib evident. Leaf-blade margins scabrous, ciliate, hairy at base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 15–40 cm long, contracted about primary branches. Primary panicle branches spreading, 1–10 cm long. Spikelets in pairs. 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, 2–2.3 mm long, 0.5 mm wide, falling entire.

Glumes. Glumes exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1.3 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 3-veined. Lower glume apex acuminate. Upper glume lanceolate, 2 mm long, 1 length of spikelet, membranous, without keels, 3-veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 3-veined, scaberulous, acute. Fertile lemma lanceolate, dorsally compressed, 2 mm long, indurate, without keel, more than 3-veined. Lemma surface punctate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid or ovoid, 1.5–2 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Brazil. Bahamas, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Puerto Rico. Brazil Northeast, Brazil Southeast, Brazil South.

Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Catarina, Rio Grande do Sul.

Panicum hylaeicum Mez. *Notizbl. Bot. Gart. Berlin*, vii. 75 (1917).

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: *Spruce Panicum* 26, Aug 1850, Brazil: in vicinibus Santarem (M; IT: K, P, US-Z0080752 (fragm. ex M)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (391, Fig. 83), S.A.Renvoize, *The Grasses of Bahia*, 1984 (132, Fig. 46), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (201, Fig. 153), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (330, Fig. 139).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (79: 797, Fig.20 (1992)).

Derivation (Clifford & Bostock 2007): Gk *hyle*, woodland; *-icum*, belonging to. Growing on forest margins.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa* .

Habit, Vegetative Morphology. Perennial. Culms rambling, robust, 100–200 cm long, without nodal roots or rooting from lower nodes. Culm-internodes terete, 4–20 cm long. Culm-nodes purple, glabrous. Leaf-sheaths 3.5–10 cm long, glabrous on surface or pilose, outer margin hairy. Ligule a ciliate membrane, 0.3–0.7 mm long. Leaf-blade base amplexicaul, with a brief petiole-like connection to sheath. Leaf-blades lanceolate or ovate, 7–26 cm long, 10–30 mm wide. Leaf-blade venation with obscure cross veins. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Panicle open, ovate, 10–32 cm long, 4.5–17.5 cm wide, contracted about secondary branches. Primary panicle branches ascending or spreading. Panicle axis scabrous. Panicle branches secund, scabrous, pubescent in axils. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.5–1.3 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.4–1.7 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.7–1 mm long, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume elliptic, 1–1.7 mm long, 0.9–1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or hispidulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, glabrous or hispidulous, acute. Palea of lower sterile floret 0.75 length of lemma. Fertile lemma elliptic, dorsally compressed, 1–1.4 mm long, 0.4–0.6 mm wide, indurate, without keel. Lemma margins involute. Lemma apex acute, scabrous. Palea embraced by lemma, involute, indurate.

Flower and Fruit. Caryopsis ellipsoid, 0.9 mm long. Embryo 0.4–0.5 length of caryopsis. Hilum punctiform.

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

Country /Province /State. **Mexico.** Northeast Mexico, Gulf (Mexico), Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay.

TDWG4. Para, Amapa, Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Sao Paulo Parana. Chaco, Corrientes, Formosa, Misiones. San Luis Potosi. Veracruz. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Panicum leptachne Doell. *Mart. Fl. Bras.* ii. II. 195. (1877).

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: *J.F. Widgren 1157*, Brazil (S; IT: US-80737 (fragm. ex S)).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (79: 802, Fig.21 (1992)).

Derivation (Clifford & Bostock 2007): Gk. *leptos*, narrow; *achne*, scale. Glumes narrow-lanceolate.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa* .

Habit, Vegetative Morphology. Perennial. Culms erect. Culm-nodes brown, glabrous or pubescent. Lateral branches lacking. Leaf-sheaths 11–14 cm long, longer than adjacent culm internode, reticulately veined, glabrous on surface or puberulous, with tubercle-based hairs. Ligule an eciliate membrane, 0.8–1 mm long, lacerate. Leaf-blade base cordate, with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades lanceolate, 13–22 cm long, 18–25 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle 10 cm long. Racemes numerous, borne along a central axis, unilateral, 1–6 cm long. Central inflorescence axis 25–40 cm long. Rhachis tuberculate on margins, ciliate on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 0.2–0.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.1–3.2 mm long, 0.5–0.8 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1–2 mm long, 0.2–0.5 length of spikelet, membranous, 1-keeled, 3(–5) -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume elliptic, 0.8 length of spikelet, membranous, without keels, 5(–7) -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male or barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 1-keeled, 3(–5) -veined, scabrous, rough on midvein, acute. Palea of lower sterile floret 0–0.8 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.8–2.5 mm long, chartaceous, light brown, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute, scabrous. Palea involute, chartaceous.

Flower and Fruit. Caryopsis obovoid. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

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

TDWG4. Sao Paulo Parana.

Panicum longum Hitchcock & Chase. *Contrib. U. S. Nat. Herb.* xv. 111 (1910).

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. **Basionym or Replaced Name:** *Panicum pilosum* var. *macranthum* Scribn., *Circ. Div. Agrostol. U.S.D.A.* 19: 1 (1900)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *C.G. Pringle 8195*, 21 May 1899, Mexico: Veracruz: near Jalapa, gravelly banks, 4000 ft (US-354552; IT: BM, MO, CM, M, NY, P, US-742435, W).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. long. Culms tall.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa* .

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 120–200 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths subequal to internodes, papillose, glabrous on surface or hirsute, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blade base broadly rounded. Leaf-blades ascending or spreading, 10–25 cm long, 6–12 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Panicle open, lanceolate, 20–25 cm long, 2–5 cm wide. Primary panicle branches simple. Panicle axis hispid. Panicle branches secund, hispid. Spikelets in pairs. 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, dorsally compressed, acute, 2 mm long, 0.9 mm wide, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface asperulous, rough above and on veins. Lower glume apex acute. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface asperulous, rough above and on veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2.1 mm long, 0.8 mm wide, indurate, without keel, more than 3-veined. Lemma surface asperulous, rough above. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Gulf (Mexico).

TDWG4. Veracruz.

Panicum pilosum Sw. *Prod. Veg. Ind. Occ.* 22. (1788).

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 Jamaica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O.P. Swartz s.n.*, Jamaica (S; IT: US-80916 (fragm. ex S)).

Recent Synonyms: *Panicum coenosum* Doell., *Mart. Fl. Bras.* 2, 2. 191. (1877). *Panicum milleflorum* Hitchcock & Chase.,

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (267, Fig. 229), S.A.Renvoize, *The Grasses of Bahia*, 1984 (132, Fig.46), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (675, Fig. 143 & 678, Fig. 144 as var. *pilosum*), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (382, Fig. 140 var. *pilosum*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (283, Fig. 81).

Illustrations (Journals): *Ruizia* (13:310, Fig. 37d-h (1993)).

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 Panicoideae. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa* .

Habit, Vegetative Morphology. Perennial. Culms decumbent, 30–60 cm long, rooting from lower nodes. Culm-internodes channelled. Culm-nodes glabrous or bearded. Ligule a fringe of hairs or absent. Leaf-blade base broadly rounded. Leaf-blades linear or lanceolate, 4–20 cm long, 7–15 mm wide. Leaf-blade surface pubescent or pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, borne along a central axis, spreading, unilateral, 1–3(–5) cm long. Central inflorescence axis 5–20 cm long. Rhachis angular, ciliate on margins. Spikelet packing crowded. Spikelets in pairs or in threes. Fertile spikelets pedicelled, 2–3 in the cluster. Pedicels present, unequal.

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

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, 1-keeled, 1–3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, 1-keeled, 5 -veined. Upper glume apex acute.

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

Flower and Fruit. $2n = 20$ (1 ref TROPICOS).

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

Country /Province /State. **Mexico.** Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay.

TDWG4. Roraima, Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso, Goias, Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Corrientes, Misiones. Queretaro, San Luis Potosi. Veracruz. Colima, Guerrero, Jalisco, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Panicum polygonatum Schrad. *Schult. Mant.* 2: 256 (1824).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Prince Maximilian Neowidens s.n.*, 1816, Brazil: Bahia: Ilheus (LE; IT: B, BAA-1935 (fragm. ex B), US-80925 (fragm. ex LE)).

Recent Synonyms: *Panicum boliviense* Hack., *Fedde, Repert.* xi. 19 (1912). *Panicum boliviense* Hack., *Fedde, Repert.* 11: 19 (1912).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (267, Fig. 227 & 268, Fig. 230 as *P. boliviense*), S.A.Renvoize, *Gramineas de Bolivia* (1998) (391, Fig. 83), S.A.Renvoize, *The Grasses of Bahia*, 1984 (32, Fig. 46 & as *P. boliviense*), J.A.Steyermark et al, *Flora of the Venezuelan Guayana*

Vol. 8 (2004) (201, Fig. 154), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (656, Fig. 140 as *P. boliviense*, 675, Fig. 143), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (373, Fig. 136), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (as *P. boliviense*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (285, Fig. 82), E.Judziwicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (399, Fig. 71).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (79: 809, Fig.23 (1992)), *Ruizia* (13:321, Fig 39e-g (1993)).

Derivation (Clifford & Bostock 2007): Gk. polys, several; gony, knee; L. -atum, possessing. Culms with hairy nodes, thereby resembling some species of *Polygonum*.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa* .

Habit, Vegetative Morphology. Perennial. Culms decumbent, slender, 50–100 cm long, rooting from lower nodes. Culm-nodes bearded. Ligule a ciliate membrane. Leaf-blade base broadly rounded. Leaf-blades linear or lanceolate, 4–20 cm long, 5–10(–15) mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 7–20 cm long, contracted about secondary branches. Primary panicle branches ascending or spreading, bearing spikelets almost to the base. Panicle branches angular, secund, with scattered hairs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acute, 1.5 mm long, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex 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, 3 -veined, acute. Fertile lemma oblong, dorsally compressed, 1.2 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. $2n = 46$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Paraguay.

TDWG4. Amazonas, Acre, Rondonia, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Misiones. Veracruz. Nayarit, Oaxaca. Chiapas.

Panicum stagnatile Hitchcock & Chase. *Contrib. U. S. Nat. Herb.* xvii. 528 (1915).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 8388 [= *Amer. Grass. Natl. Herb.* 544], 12 Oct 1911, Panama: Canal Zone: in water of swamp, Frijoles, culms decumbent and rooting at the lower nodes (US-693328; IT: BAA (fragm.), F, G, K, LL, MO-853765, MO-853766, NY, P, US, W).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *stagnum*, pool; -*atile*, place of growth. Growing in pools.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa* .

Habit, Vegetative Morphology. Perennial. Culms decumbent, 100–200 cm long, 4–5 mm diam., rooting from lower nodes. Culm-internodes elliptical in section, 12–20 cm long. Culm-nodes glabrous or pubescent. Lateral branches lacking or sparse. Leaf-sheaths striately veined, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.8 mm long. Leaf-blade base broadly rounded or cordate. Leaf-blades lanceolate, 22–35 cm long, 15–30 mm wide. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 20–40 cm long, contracted about secondary branches. Primary panicle branches ascending or spreading, 1–2 cm long, bearing spikelets almost to the base. Panicle axis scabrous. Panicle branches angular, secund, pubescent 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 lanceolate, dorsally compressed, 1.6–1.8 mm long, 0.4–0.5 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.6–0.9 mm long, 0.33–0.5 length of spikelet, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume apex acute. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume surface scabrous. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, scabrous, acute. Fertile lemma elliptic, dorsally compressed, 1.5 mm long, 0.4 mm wide, chartaceous, pallid, without keel. Lemma margins flat (above) or involute (below). Lemma apex acute. Palea involute, chartaceous.

Flower and Fruit. Anthers 0.4–0.8 mm long.

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

Country /Province /State. Mexico. Central Mexico, Gulf (Mexico), Southeast Mexico. **Mesoamerica, Western South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Colombia.

Puebla. Veracruz. Chiapas, Tabasco.

Panicum stevensianum Hitchcock & Chase. *Contrib. US. Nat. Herb.* xvii. 498 (1915).

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 Puerto Rico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Chase 6616, 25 Nov 1913, Puerto Rico: Campo Alegre, near Laguna del Tortugero (US-693323; IT: NY-71075, NY-71076, US).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (269, Fig. 232).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Frank Lincoln Stevens (1871–1934) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa* .

Habit, Vegetative Morphology. Perennial. Culms prostrate, 30–60 cm long, rooting from lower nodes. Culm-internodes elliptical in section, distally glabrous. Culm-nodes brown, glabrous. Leaf-sheaths striately veined, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.4–1 mm long. Collar glabrous. Leaf-blades 2–8 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear or lanceolate, 8–28 cm long, 1–6 cm wide, contracted about primary branches. Primary panicle branches appressed, 1.5–3 cm long, bearing spikelets almost to the base. Panicle axis scabrous. Panicle branches scabrous. Spikelets in pairs. 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, dorsally compressed, acute, 2 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.8–1.1 mm long, 0.25 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, membranous, 1-keeled, 3–5 -veined. Upper glume primary vein scaberulous. 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, 3–5 -veined, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.9 mm long, 0.6 mm wide, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute, scabrous. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America, Western South America, Brazil. Cuba, Puerto Rico. Venezuela. Colombia.

"Panicum" sect. Laxa Genus

Classification. Tribe: Paspaleae. Subtribe “*Panicum*” sect. *Laxa* .

Panicum bartlettii Swallen. *Publ. Carnegie Inst. Wash.* 436: 346 (1934).

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. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *H.H. Bartlett 12245*, 23 Mar 1931, Guatemala: Petén: Uaxactun (US-1503674).

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Perennial. Culms rambling, 100–150 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 0.2–0.3 mm long. Leaf-blades lanceolate, 10–20 cm long, 15–25 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 10–30 cm long, 7–25 cm wide. Primary panicle branches ascending. 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, 1.8–2 mm long, falling entire, readily shedding glumes.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

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

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

Country /Province /State. Mexico. Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean. Belize, Guatemala.

Hidalgo, San Luis Potosi. Veracruz. Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Panicum brachyanthum Steud. *Syn. Pl. Gram.* 67. (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 USA. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Vinzent 124*, no date, USA: Texas: Rusk Co.: in *sabulosus sylvaticus* (P; IT: US-80479 (fragm. & photo ex P)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (489), F.W.Gould, *The Grasses of Texas* (1975) (451, Fig. 240).

Derivation (Clifford & Bostock 2007): Gk *brachys*, short; *anthos*, flower. Panicle depauperate with few branches.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Annual. Culms decumbent, slender, 30–100 cm long, wiry. Leaf-sheaths outer margin hairy. Ligule a fringe of hairs. Leaf-blades 5–15 cm long, 1–3 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–15 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 3.2–4 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.4–0.5 mm long, 0.15 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface hispid, with tubercle-based hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, hispid, with tubercle-based hairs, acute. Fertile lemma oblong, dorsally compressed, 3–3.5 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA, Southeastern USA. Texas. Alabama, Arkansas, Louisiana, Mississippi.

Panicum brevifolium (Link) Kunth, non L.(1753). *Rev. Gram.* i. 32. (1829).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: India (LINN-80.64; ILT: US-974789 (fragm. ex L, assuming this is from 80.64)). LT designated by Veldkamp, *Blumea* 41: 189 (1996).

Illustrations (Books): W. Robyns (1929 and 1934). *Flora Agrostologique du Congo Belge et du Ruanda-Urundi*, I. Maydees et Andropogonees and II. Panicees. Bruxelles, Goemaere (225, Pl. 39), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (327, Fig 121), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (552), C-C Hsu, *Taiwan Grasses* (1975) (571, Fig. 1436), H.J.Noltie, *The Grasses of Bhutan* (2000) (691, Fig. 38), H.B.Gilliland, *Grasses of Malaya* (1971) (138, Fig 26), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (101, Fig. 98), S.A.Renvoize, *The Grasses of Bahia*, 1984 (163, Fig. 59), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 715), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:77(1980)).

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

Derivation (Clifford & Bostock 2007): L. brevis, short; folium, leaf. Leaf-blades shorter than those of some other species in the genus or relative to the length of the culm.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Annual. Culms rambling, 15–100 cm long, rooting from lower nodes. Leaf-sheaths outer margin hairy. Ligule a ciliate membrane. Leaf-blade base amplexicaul. Leaf-blades ovate, 5–10 cm long, 10–25(–38) mm wide, membranous. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous or pilose. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–16 cm long. Primary panicle branches spreading. Panicle branches capillary, flexuous or tangled. Spikelets solitary. Fertile spikelets pedicelled, all alike or heteromorphic (peripheral spikelets villous). Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, gibbous, acute, 1.5(–1.8) mm long, falling entire. Rachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 1 length of spikelet, hyaline, without keels, (1–)3 -veined. Lower glume surface puberulous or pilose. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, herbaceous, without keels, 5 -veined. Upper glume surface puberulous or pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, dorsally compressed, 1 mm long, indurate, pallid, shiny, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. *N* = 18 (3 refs TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, South America.

Country /Province /State. West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Ghana, Guinea-Bissau, Guinea, Senegal, Sierra Leone, Niger. Cameroon, Gabon, Annobon, Principe & Sao Tome, Bioko, Rwanda, DRC. Kenya, Tanzania, Uganda. Malawi, Mozambique, Zambia, Zimbabwe. Mauritius, Madagascar, Seychelles. **China, Eastern Asia.** China South Central, China Southeast. Taiwan. **Indian Subcontinent, Indo-China, Malesia.** Eastern Himalaya, India, Sri Lanka. Cambodia, Laos, Myanmar, Thailand, Vietnam. Borneo, Java, Malaya, Singapore, Philippines, Sumatra. **Caribbean, Brazil.** Brazil Northeast.

TDWG4. Fujian, Guangdong, Guangxi, Jiangxi. Guizhou, Yunnan. Darjeeling, Bhutan, Sikkim. Assam, Meghalaya, Nagaland. Andhra Pradesh, Kerala. Orissa, Tamilnadu.

Pilger Panicoids.

Panicum hirtum Lam. *Encyc.* iv. 74 1. (1798).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Martin s.n.*, French Guiana: Cayenne (P-LA; IT: G, P, US-2907497 (fragm. ex B,P)).

Recent Synonyms: *Panicum heterostachyum* Hack., *Oesterr. Bot. Zeitschr.* 1901, 430. (1901).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (327, Fig. 285 as *heterostachyum*), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (208, Fig. 86 as *P. heterostachyum*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (279, Fig. 250), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (200, Fig. 152), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (418, Fig. 74).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, 20–80 cm long. Ligule a ciliate membrane. Leaf-blade base amplexicaul. Leaf-blades ovate, 8–12 cm long, 10–25 mm wide, membranous. Leaf-blade venation with distinct cross veins. Leaf-blade surface pilose. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, dense, 7–15 cm long. Primary panicle branches spreading. Panicle branches capillary, tangled, glandular. 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, straight or tilted on the pedicel, dorsally compressed, gibbous, acute, 1.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 1 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface pubescent or pilose. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, herbaceous, without keels, 5 -veined. Upper glume surface pubescent or pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, hyaline, 5 -veined, acute. Fertile lemma oblong, dorsally compressed, 1 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Niger. Rwanda. Eritrea, Ethiopia (inc. Eritrea). Kenya, Tanzania, Uganda. Angola, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, Mpumalanga. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Belize, Nicaragua. Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Colombia, Ecuador. Brazil Northeast, Brazil North.

Panicum millegrana Poir. *Encyc. iv.* 278 (1816).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *hb. Kunth*, Guiane française (LE-TRIN-0830.01 (fragm. ex hb. Desf. 366 & fig.)). 366. *Pan. millegrana* Poir. ex hb. Desf. (*Pan. hirsutum* Lam.). HT: *Martin s.n.*, French Guiana: Cayenne (P; IT: US (fragm.)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (Fig. 86), S.A.Renvoize, *The Grasses of Bahia*, 1984 (163, Fig. 59), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (191, Fig. 134), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (720, Fig. 152), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (257, Fig. 71).

Illustrations (Journals): *Darwiniana* (22: 21, Fig.5 (1979)).

Derivation (Clifford & Bostock 2007): L. mille, one thousand; granum, grain. Inflorescence of many spikelets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 50–100 cm long. Culm-internodes distally glabrous or pubescent. Lateral branches sparse. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Leaf-sheath oral hairs pubescent. Ligule an eciliate membrane, 0.3 mm long. Leaf-blade base broadly rounded or cordate, asymmetrical. Leaf-blades ascending or spreading, lanceolate, 4–15 cm long, 10–30 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins glabrous or ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10–20 cm long, bearing few spikelets, with spikelets clustered towards branch tips. Primary panicle branches ascending or spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret

male or barren, the upper fertile. Spikelets obovate, dorsally compressed, compressed slightly, obtuse, 2–2.3 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume elliptic, 0.9 length of spikelet, membranous, dark green, without keels, 5 -veined. Upper glume surface papillose, rough on veins, glabrous or hispidulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, dark green, 5 -veined, papillose, rough on veins, glabrous or hispidulous, acute. Fertile lemma elliptic, dorsally compressed, 1.9–2.1 mm long, 1 mm wide, indurate, dark brown, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

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

Country /Province /State. Mexico. Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Belize, Guatemala, Honduras, Panama. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay, Uruguay.

TDWG4. Para, Amapa, Mato Grosso, Bahia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Corrientes, Misiones. Chiapas.

***Panicum rupestre* Trin. *Gram. Panic.* 109. (1826).**

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *G.H. von Langsdorff s.n.*, Nov. 24, Brazil: Minas Gerais: in rupibus Serra da Lapa (LE-TRIN-0935.01 (& figs.); IT: US-974673 (fragm. ex LE)).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (158, Fig. 57).

Derivation (Clifford & Bostock 2007): *L. rupes*, rock; -estre, place of growth; Growing amongst rocks.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect or geniculately ascending, 30–35 cm long, wiry. Lateral branches ample. Leaves cauline. Ligule a ciliate membrane. Leaf-blades linear or lanceolate, flat or involute, 3–10 cm long, 1–5 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 5–10 cm long. Primary panicle branches moderately divided or profusely divided. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or orbicular, dorsally compressed, 1.5–2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface puberulous. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface puberulous. Upper glume apex acute.

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

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo.

***Panicum sellowii* Nees. *Agrost. Bras.* 153 (1829).**

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

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *F. Sellow s.n.*, Brazil (B; IT: LE, US-2830928 (fragm. ex B, LE)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (274, Fig. 243), S.A.Rennoize, *The Grasses of Bahia*, 1984 (163, Fig. 59), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (300, Fig. 87).

Illustrations (Journals): *Darwiniana* (22: 15, Fig.3 (1979)).

Derivation (Clifford & Bostock 2007): in honor of Friedrich Sellow (1789–1831) German botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms rambling, 100–150 cm long, 1–2 mm diam. Culm-internodes distally glabrous or pubescent. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths glabrous on surface or pubescent, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.2–0.3 mm long. Collar pilose. Leaf-blade base cordate, asymmetrical. Leaf-blades ovate, 6–12 cm long, 7–18 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, effuse, 10–28 cm long, 4–16 cm wide. Primary panicle branches ascending or reflexed, 1–2 -nate, simple, 5–14 cm long. Panicle branches straight. Spikelets appressed, 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 obovate, dorsally compressed, acute, 2–2.3 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1.2–1.5 mm long, 0.66 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 1.8–2 mm long, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 1.9–2.2 mm long, 1 length of spikelet, membranous, 5 -veined, pubescent, acute. Fertile lemma ovate, dorsally compressed, 1.6–1.9 mm long, indurate, dark brown, without keel. Lemma surface rugulose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.1 mm long, purple. Caryopsis ellipsoid, 1.2 mm long.

$2n = 54$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua. Cuba, Trinidad-Tobago. Guyana, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay.

TDWG4. Mato Grosso, Goias, Bahia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Corrientes, Misiones. Queretaro. Veracruz. Oaxaca. Chiapas.

Panicum subulatum Spreng. *Syst. i.* 319. (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: Brazil (?); IT: MO-2098706 (probable), US).

Illustrations (Books): S.A.Rennoize, *The Grasses of Bahia*, 1984 (171, Fig. 63).

Derivation (Clifford & Bostock 2007): *L. subulus*, a fine point; -ata, possessing. Leaf-blades sharply tapered.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Perennial. Rhizomes short, knotty. Culms erect, slender, 15–30 cm long, wiry. Lateral branches ample, arising from upper culm, erect. Ligule a ciliate membrane. Leaf-blades flat or involute, 2–5 cm long, 1–2 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 1.5–8 cm long. Primary panicle branches sparsely divided. 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, 1.4–1.7 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume 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, 1.4–1.7 mm long, indurate, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo.

Panicum trichanthum Nees. *Agrost. Bras.* 210 (1829).

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 & Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *T. Haenke s.n.*, Mexico (PR, US-81147 (fragm. ex PR)). LT: *Humboldt & Bonpland s.n.*, Mexico (B-W). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: 131 (1910). ST: *Sieber s.n.*, Brazil (B).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (272, Fig. 239), S.A.Renvoize, *Gramineas de Bolivia* (1998) (391, Fig. 83), S.A.Renvoize, *The Grasses of Bahia*, 1984 (156, Fig. 56), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (734 & 739, Fig. 154 & 156), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (320, Fig. 130), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (389, Fig. 142), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (311, Fig. 91), B.Rosengurt, *Gramineas Uruguayas I* (1970), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (433, Fig 77).

Illustrations (Journals): *Ruizia* (13:316, Fig 38f (1993)).

Derivation (Clifford & Bostock 2007): Gk. thrix, hair; anthos, flower. Spikelets hairy.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Perennial. Culms rambling, 100–150 cm long, 1.5–2.5 mm diam., rooting from lower nodes. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.2–0.3 mm long. Collar pilose. Leaf-blade base cordate, with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long. Leaf-blades lanceolate, 5.5–13 cm long, 8–23 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence a panicle. Panicle open, obovate, 17–27 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flexuous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, subacute, 1.2–1.6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2–0.4 mm long, 0.15–0.25 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1.2–1.6 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface tuberculate (papillose). Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, ovate, 4 mm long, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma ovate, dorsally compressed, 2–2.5 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, oblong, 0.8 mm long, light brown.

$2n = 36$ (3 refs TROPICOS).

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

Country /Province /State. Mexico. Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Argentina Northwest, Paraguay.

TDWG4. Mato Grosso, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Jujuy, Salta. Chaco, Corrientes, Entre Rios, Formosa, Misiones, Santa Fe. San Luis Potosi, Tamaulipas. Veracruz. Colima, Oaxaca. Campeche, Chiapas, Tabasco.

Panicum trichoides Sw. *Prod. Veg. Ind. Occ.* 24 (1788).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Jamaica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *O.P. Swartz s.n., left-hand specimen*, Jamaica (S; ILT: US-81153 (fragm. ex S)). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 140 (1908).

Illustrations (Books): 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) (489), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (272, Fig. 238), S.A.Renvoize, *Gramineas de Bolivia* (1998) (391, Fig. 83), S.A.Renvoize, *The Grasses of Bahia*, 1984 (163, Fig. 59), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (205, Fig. 160), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (389, Fig. 142), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (433, Fig. 77), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 715), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:88(1980)).

Illustrations (Journals): *Ruizia* (13:316, Fig 38a-b (1993)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): Gk. thrix, hair; -oides, resembling. Spikelets sparsely hirsute.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, slender, 15–100 cm long. Leaf-sheaths hispid, outer margin hairy. Ligule a ciliate membrane. Leaf-blade base simple or cordate, asymmetrical. Leaf-blades lanceolate or ovate, 3–7 cm long, 5–20 mm wide, membranous. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 6–16 cm long. Panicle branches capillary. 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, gibbous, obtuse, 1–1.5 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3–5 -veined, pubescent, acute. Fertile lemma oblong, dorsally compressed, 0.8–1.2 mm long, indurate, pallid, without keel, more than 3-veined. Lemma surface granulose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 18$ (2 refs TROPICOS).

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

Country /Province /State. **West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa.** Ghana, Nigeria. **DRC.** Kenya, Tanzania, Uganda. Malawi, Mozambique, Zambia. **Arabian Peninsula, China.** Oman. Hainan, China Southeast. **Indo-China, Malesia, Papuasia.** Thailand, Vietnam. Java, Lesser Sunda Is, Philippines, Christmas I. New Guinea West Papua (Irian Jaya). New Guinea, Solomon Is. **Australia.** Western Australia, Northern Territory, Queensland. **South-central USA, Mexico.** Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Bahamas, Bermuda, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North. Argentina Northwest.

TDWG4. Guangdong. Kimberley. Darwin & Gulf. North, Central, Inland. Para, Amapa, Mato Grosso, Goias, Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo. Jujuy, Salta. Mexico State, Morelos, Puebla. Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Baja California, Baja California Sur, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Pilger Panicoids.

Panicum verrucosum Muhl. *Desc. Gram.* 113. (1817).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Muhlenberg 107, 6, USA* (PH; IT: US (fragm. & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (489), F.W.Gould, *The Grasses of Texas* (1975) (451, Fig. 239).

Derivation (Clifford & Bostock 2007): L. verruca, wart; -osa, abundance. Glumes with warty protuberances.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe INCERTAE SEDIS.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending or decumbent, 50–120 cm long. Lateral branches sparse or ample. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a fringe of hairs, 0.3 mm long. Leaf-blades 5–20 cm long, 4–10 mm wide, flaccid, light green. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 5–30 cm long, bearing few spikelets, with spikelets clustered towards branch tips. Primary panicle branches spreading, 1–3 cm long. Panicle branches stiff. 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 obovate, dorsally compressed, 1.7–2.1 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2–0.25 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface tuberculate. Upper glume apex acute.

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

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. North America.

Country /Province /State. Northeast USA, South-central USA, Southeastern USA. Indiana, Maine, Massachusetts, Michigan, New Hampshire. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia.

"Panicum" sect. *Monticola* Genus

Pappophorum bicolor Fourn. *Mex. Pl. Enum., Gram.* 133 (1886).

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: IT: *Karwinsky 1483, Mexico* (US-899499 (fragm. ex LE)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (288), F.W.Gould, *The Grasses of Texas* (1975) (379, Fig. 200).

Derivation (Clifford & Bostock 2007): L. bis, twice; color, color. Two-colored, usually with respect to spikelets or florets.

Classification. Subfamily Chloridoideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 30–80(–100) cm long. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blades flat or involute, 10–20(–30) cm long, 1.5–5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 12–20 cm long. Primary panicle branches 1–4 cm long. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, 1–5 mm long.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 6–8 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus pilose.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 3–4 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins

absent. Lower glume apex acute. Upper glume ovate, 3–4 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–4 mm long, chartaceous, red (pink), without keel, 11–15 -veined, more than 3-veined. Lemma midvein pubescent, hairy below. Lemma margins pubescent, hairy below. Lemma apex awned, 11–15 -awned. Principal lemma awn 2.5–5 mm long overall, limb scaberulous. Lateral lemma awns present, of irregular length. Palea 1.1 length of lemma, 2 -veined. Palea keels ciliate. Palea apex acuminate. Apical sterile florets distinct from fertile, 2 in number, barren, in a clump, oblong. Apical sterile lemmas awned, 11–15 -awned.

Flower and Fruit. *N* = 50 (1 ref TROPICOS).

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA, Mexico. Texas. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico.

Mexico State. Coahuila, Chihuahua, Durango, Guanajuato, Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Guerrero.

Pappophorum caespitosum R. Fries. *Nov. Act. Soc. Sci. Upsal. Ser. IV. i. no. 1, 177. (1905).*

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: IT: *R.E. Fries 804*, 20 Nov 1901, Argentina: Jujuy (US-1162325).

Illustrations (Books): S.A.Rennoize, *Gramineas de Bolivia* (1998) (287, Fig 58), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (353, Fig. 121), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (491, Fig 332).

Derivation (Clifford & Bostock 2007): *L. caespes*, grass that has been cut; -osa, abundance. Habit tufted.

Classification. Subfamily Chloridoideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 6–80 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 1.5–3 mm long. Leaf-blades convolute, 5–25 cm long, 3–4 mm wide, stiff. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 4–18(–30) cm long, 1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1–2 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3.5–4.5 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3 mm long, 0.66–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, mucronate. Upper glume ovate, 3.5–4.5 mm long, 1.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, mucronate.

Florets. Fertile lemma oblong, 2–2.5 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma midvein ciliate. Lemma inner surface glabrous. Lemma margins ciliate. Lemma apex awned, 20–22 -awned. Principal lemma awn 3.5–5.3 mm long overall. Lateral lemma awns present, of irregular length. Palea keels scaberulous. Apical sterile florets 2–4 in number, barren, in a clump, rudimentary. Apical sterile lemmas awned, 20–22 -awned.

Flower and Fruit. Anthers 3, 0.4–0.5 mm long. Caryopsis 2 mm long. Embryo 0.4 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina South, Argentina Northwest, Paraguay.

TDWG4. Catamarca, Jujuy, La Rioja, Mendoza, Salta, Santiago del Estero, San Juan, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Entre Rios, La Pampa, Santa Fe. Río Negro.

Pappophorum hassleri Hack. *Bull. Herb. Boiss. Ser. II. iv. 280. (1904).*

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Hassler 4456*, Paraguay: fl. Capibary (US-76118 (fragm. ex Delessert)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Emil Hassler (1861–1939) Swiss-born Paraguayan botanist.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 40–50 cm long. Ligule a fringe of hairs. Leaf-blades 7–15 cm long, 3–4 mm wide.

Inflorescence. Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle contracted, lanceolate or elliptic, 5–8 cm long. 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 ovate, laterally compressed, 8–9 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 7–8 mm long, 0.8–0.9 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid, mucronate. Upper glume elliptic, 8–9 mm long, 3 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, mucronate.

Florets. Fertile lemma oblong, 2.5 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma midvein ciliate, hairy below. Lemma margins ciliolate. Lemma apex awned, 18–22 -awned. Principal lemma awn 8–12 mm long overall. Lateral lemma awns present, of irregular length. Apical sterile florets 2 in number, barren, in a clump, rudimentary. Apical sterile lemmas awned, 18–22 -awned.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Paraguay.

Pappophorum krapovickasii Roseng. *Comun. Bot. Mus. Hist. Nat. Montevideo*, 4(58): 1 (1975).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Paraguay: Chaco: Mariscal Estigarribia, 22°00'S, 60°42'W, en claros de monte, 24 Jan 1950, *Rosengurt B-5816* (HT: MVFA).

Illustrations (Books): S.A.Renouze, *Gramineas de Bolivia* (1998) (287, Fig 58).

Derivation (Clifford & Bostock 2007): in honor of Antonia Krapovickas (fl. 1957–1963) who collected in Argentina.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 40–120 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface to pubescent. Ligule a fringe of hairs, 1–3 mm long. Leaf-blades flat or convolute, 10–30 cm long, 1.5–6 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous to pubescent.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, continuous or interrupted, 20–40 cm long, 1.5–3 cm wide. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Sterile Spikelets. Apical sterile spikelets absent or barren.

Fertile Spikelets. Spikelets comprising 1–2 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–12 mm long, 1–2 mm wide, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 4–7 mm long, 0.9 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute, awned, 1 -awned, awn 0.5–1 mm long. Upper glume ovate, 4–7 mm long, 2 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 0.5–1 mm long.

Florets. Fertile lemma oblong, 2–2.5 mm long, coriaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface pubescent, inner surface pubescent. Lemma apex awned, 19–26 -awned. Principal lemma awn 6–9 mm long overall. Lateral lemma awns present, of irregular length. Palea 2–2.3 mm long. Apical sterile florets 3–4 in number, barren, in a clump, elliptic. Apical sterile lemmas awned, 19–26 -awned.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, ovoid, sulcate on hilar side, 1.4–2 mm long, dark brown. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia, Colombia. Brazil Northeast. Uruguay.

TDWG4. Catamarca, La Rioja, Salta. Cordoba, Corrientes, Formosa.

Pappophorum macrospermum Roseng., B.R. Arrill. & Izag. *Gramin. Urug.* 397, f. 178 (1970).

Regarded by K as a synonym (*P. philippianum*).

TYPE from Uruguay. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Uruguay: Rivera: ruta 30 entre Bajada de Pena y A. Rubio Chico, 7 Feb 1966, *Del Puerto & Marchesi 6080* (HT: MFVA).

Illustrations (Books): B.Rosengurt, *Gramineas Uruguayas I* (1970) (398, Fig. 178).

Derivation (Clifford & Bostock 2007): Gk. makros, large; sperma, seed. Grains large.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 50–90 cm long. Leaf-sheath oral hairs bearded, deciduous, 2–3.5 mm long. Ligule a fringe of hairs, 0.6 mm long. Leaf-blades 10–25 cm long, 2.5–4 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or oblong, interrupted, 12–20 cm long, 1.5 cm wide. Panicle branches scaberulous, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–4 mm long, scaberulous, glabrous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 7.5–10 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Floret callus 0.7–0.8 mm long, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7.5–10 mm long, 1 length of upper glume, chartaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex entire or dentate, 2 -fid, acuminate, muticous or mucronate. Upper glume lanceolate, 7.5–10 mm long, 2.5–3 length of adjacent fertile lemma, chartaceous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex entire or dentate, 2 -fid, acuminate, muticous or mucronate.

Florets. Fertile lemma oblong, 3–3.5 mm long, coriaceous, without keel, 7–11 -veined, more than 3-veined. Lemma midvein ciliate. Lemma inner surface glabrous. Lemma margins pubescent. Lemma hairs 0.8–1.1 mm long. Lemma apex awned, 17–19 -awned. Principal lemma awn 8–10 mm long overall. Lateral lemma awns present, of irregular length. Palea 3.8–4.5 mm long. Palea keels 1.5–1.7 mm apart, ciliate, with hairs 0.6–0.8 mm long. Apical sterile florets 3–4 in number, barren, in a clump, rudimentary. Apical sterile lemmas awned, 13–17 -awned.

Flower and Fruit. Anthers 3, 1.5 mm long, yellow. Stigmas purple. Caryopsis with adherent pericarp, ellipsoid or ovoid, sulcate on hilar side, 2.3–2.6 mm long. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG), Continent. South America.

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

TDWG4. Corrientes.

Pappophorum mucronulatum Nees. *Mart. Fl. Bras.* ii. 412. (1829).

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>: *vide* TROPICOS and Kew Synonymy Database: IST: *Martius s.n.*, 1834, Brazil (LE-TRIN-2199.01, M). ST: *Martius s.n.*, Brazil: Bahia (B; IST: BAA-2012 (fragm. ex B), US-76117 (fragm. ex M)).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (207, Fig. 75), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (351, Fig. 91), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (488, Fig. 330 as *P. subbulbosum*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (396, Fig. 177 as *P. subbulbosum*).

Illustrations (Journals): *Ruizia* (13:239, Fig 27a-b (1993)).

Derivation (Clifford & Bostock 2007): L. mucronulus, small hook. -atus, possessing. Lemma shortly aristate.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 25–60(–90) cm long. Ligule a fringe of hairs. Leaf-blades flat or involute, 10–30 cm long, 2–5 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle contracted, linear, 12–28 cm long, 1–1.5 cm wide. Primary panicle branches appressed or ascending, 2–3.5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1–2 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3.5–5 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3–4.5 mm long, 0.8–0.9 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3.5–5 mm long, 1.6–2.3 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 1.5–3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma midvein ciliate. Lemma margins ciliate. Lemma apex awned, 12–15 -awned. Principal lemma awn 4–7 mm long overall, 1.5–2 length of lemma. Lateral lemma awns present, of irregular length. Apical sterile florets 1–2 in number, barren, in a clump, rudimentary. Apical sterile lemmas awned, 12–15 -awned.

Flower and Fruit. Caryopsis 2–2.5 mm long. Embryo 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, Brazil, Southern South America. Honduras. Venezuela. Colombia. Brazil Northeast. Argentina Northeast.

TDWG4. Goiás, Bahia, Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe. Buenos Aires, Entre Ríos.

Pappophorum pappiferum (Lam.) Kuntze. *Rev. Gen.* iii. II. 365 (1898).

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 South America. **Basionym or Replaced Name:** *Saccharum pappiferum* Lam., *Tabl. Encycl.* 1: 155 (1791). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Richard s.n.*, South America (P-LAM; IT: BAA (fragm.), US-76121 (fragm. ex P-LAM)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (60, Fig. 33), S.A.Renvoize, *Gramineas de Bolivia* (1998) (287, Fig 58), S.A.Renvoize, *The Grasses of Bahia*, 1984 (58, Fig. 20), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (209, Fig. 163), A.Burkat, *Flora Ilustrada de Entre Ríos (Argentina)*, Pt II, Gramineas (1969) (206, Fig 74), G.Harling & C.Persson, *Flora of Ecuador* (2006) (68: 5, Fig. 1 (2001)).

Derivation (Clifford & Bostock 2007): Gk. pappos, grandfather; L. fero, bear. Lemma apices bearded, terminating in about thirteen slender awns.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms robust, 90–155(–200) cm long. Ligule a fringe of hairs. Leaf-blades persistent or deciduous at the ligule, flat or convolute, 25–60 cm long, 3–7 mm wide. Leaf-blade apex filiform.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, lanceolate, 23–60 cm long, 2–10 cm wide. Primary panicle branches appressed or ascending, 5–13 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3–5.5 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3–5 mm long, 1 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3–5.5 mm long, 2 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 1.5–2.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma midvein ciliate. Lemma margins ciliate. Lemma apex awned, 12–15 -awned. Principal lemma awn 5–9 mm long overall, 2.5–3 length of lemma. Lateral lemma awns present, of irregular length. Apical sterile florets 2 in number, barren, in a clump, rudimentary. Apical sterile lemmas awned, 12–15 -awned.

Flower and Fruit. Caryopsis ovoid, 1.8 mm long.

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

Country /Province /State. Mexico. Northeast Mexico, Gulf (Mexico), Southwest Mexico. **Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Cuba, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago, Venezuelan and Netherlands Antilles. Guyana, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil Northeast. Argentina Northeast, Argentina Northwest, Paraguay.

TDWG4. Bahía. Catamarca, Jujuy, Mendoza, Salta, Santiago del Estero, San Luis, Tucumán. Buenos Aires, Chaco, Córdoba, Corrientes, Distrito Federal, Entre Ríos, Formosa, La Pampa, Santa Fe. Coahuila. Veracruz. Nayarit, Oaxaca.

Pappophorum philippianum L. Parodi. *Not. Mus. La Plata, Bot.*, viii. 79 (1943).

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. **Basionym or Replaced Name:** *Pappophorum vaginatum* Phil., *Anales Univ. Chile* 36: 206 (1870). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Anon.*, Mendoza (SGO; IT: B, BAA-2025 (fragm. ex B), SGO-45800, SGO-37102, US-1939964 (fragm. ex SGO-45800 & photo)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (287, Fig 58), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (485, Fig 327).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Rudolf Amandus Philippi (1808–1904) German-born Chilean biologist and museum director.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent. Culms 30–45 cm long. Leaf-sheaths pubescent, outer margin hairy. Ligule a fringe of hairs. Leaf-blades convolute, 8–15 cm long, 1–2 mm wide, flaccid.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 4–10 cm long. 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 ovate, laterally compressed, 10–12 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 7 mm long, 0.6–0.9 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 8–11 mm long, 2 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 4–5 mm long, coriaceous, without keel, 7–9 -veined, more than 3-veined. Lemma midvein ciliate. Lemma inner surface pubescent. Lemma margins ciliate. Lemma hairs 2–4 mm long. Lemma apex awned, 11–14 -awned. Principal lemma awn 3–10 mm long overall. Lateral lemma awns present, of irregular length. Apical sterile florets 2 in number, barren, in a clump, elliptic, 1.5 mm long. Apical sterile lemmas awned, 11–14 -awned.

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

Country /Province /State. **Southwestern USA, South-central USA, Mexico.** Arizona. Texas. Northwest Mexico. **Western South America, Brazil, Southern South America.** Bolivia. Argentina South, Argentina Northwest, Uruguay.

TDWG4. Catamarca, Jujuy, La Rioja, Mendoza, Salta, Santiago del Estero, San Juan, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Formosa, La Pampa, Santa Fe. Río Negro. Sonora.

Pappophorum vaginatum Buckley. *Prelim. Rep. Surv. Texas* 1 (1866).

Regarded by K as a synonym (*P. mucronulatum*).

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 USA. **Basionym or Replaced Name:** *Pappophorum subbulbosum*. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *C. Wright 803*, May 1849-Oct 1849, USA: Texas (US-76124).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (288), F.W.Gould, *The Grasses of Texas* (1975) (381, Fig. 201).

Derivation (Clifford & Bostock 2007): L. vagina, sheath; -ata, possessing. Leaf-sheaths conspicuous.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

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

Country /Province /State. **Southwestern USA, South-central USA, Mexico.** Arizona. New Mexico, Texas. Central Mexico, Northeast Mexico, Northwest Mexico. **Southern South America.** Argentina South, Paraguay, Uruguay.

TDWG4. Catamarca, La Rioja, Salta, Santiago del Estero, Tucuman. Buenos Aires, Chaco, Cordoba, Entre Rios, La Pampa, Santa Fe. Neuquén, Río Negro. Puebla. Coahuila, Chihuahua, Durango, Neuvo Leon, San Luis Potosi, Tamaulipas, Zacatecas. Sonora.

Pappostipa ameghinoi (Speg.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 184 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa ameghinoi* Speg., *Anal. Mus. Montevid.* 4. tt. 163 (1901). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Golfo San Jarge: Ameghino (LP holo).

Recent Synonyms: *Jarava ameghinoi* (Speg.) Penail., Gayana, *Bot.* 59(1): 30 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (302, Fig 197 as *Stipa*).

Derivation (Clifford & Bostock 2007): in honor of Carlos Ameghino (1865–1936) botanical collector in Patagonia and Argentina.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths purple. Culms erect, 10–25 cm long, 0.5–0.7 mm diam., 2–3 -noded. Culm-internodes smooth, distally glabrous or pubescent. Culm-nodes constricted, glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, smooth, glabrous on surface. Leaf-sheath oral hairs lacking or pubescent. Ligule a ciliate membrane, 1 mm long. Leaf-blades straight or curved, conduplicate, 2–8 cm long, 0.4–0.7 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, comprising 6–10 fertile spikelets, embraced at base by subtending leaf. Panicle open, oblong, 3–5 cm long, 1–1.5 cm wide, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 3–5 mm long, ciliate, hairy above.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 17–24 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, curved, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 17–24 mm long, 1.05 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 16–23 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 7–7.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma margins convolute, covering most of palea. Lemma hairs 1–3 mm long. Lemma apex dentate, 2 -fid, with lobes 1 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 25–35 mm long overall, with twisted column. Column of lemma awn 9–12 mm long, plumose. Palea 5–5.5 mm long, 2 -veined, without keels. Palea surface pilose.

Flower and Fruit. Lodicules 3. Anthers 3, yellow, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza. Chubut, Neuquén, Santa Cruz.

Pappostipa atacamensis (Parodi) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 184 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa atacamensis* L. Parodi, *Rev. Argent. Agron.* 27: 85 (1961). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile, Quebrada de Plaza: Hunziker 5789 (BAA holo, CONC, K, SGO).

Recent Synonyms: *Jarava atacamensis* (Parodi) Penail., Gayana, *Bot.* 59(1): 30 (2002).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Provincia de Atacana, Chile.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–25 cm long, 0.6–1 mm diam. Culm-internodes distally glabrous or pubescent. Ligule an eciliate membrane, 2–3 mm long, 0.3–0.5 mm long on basal shoots. Leaf-blades filiform, convolute, 4–8 cm long, 0.5 mm wide. Leaf-blade surface ribbed.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, linear, 4–6 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate, hairy at tip.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, curved, 0.75 mm long, glabrous, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 18 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 6.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy above. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn geniculate, 20 mm long overall, with twisted column. Column of lemma awn 10–11 mm long, plumose, with 2–5 mm long hairs. Palea 2 -veined, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 5 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile North, Chile Central.

TDWG4. Catamarca. Antofagasta, Atacama. Coquimbo, Santiago.

Pappostipa barrancaensis (F.A.Roig) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 184 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa barrancaensis* F.A.Roig, *Rev. Fac. Cienc. Agrar. Univ. Nac. Cuyo*, 11: 46 (1966). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Ranquil Norte: Leal 21547 (MEN holo).

Recent Synonyms: *Jarava barrancaensis* (F.A.Roig) Penail., *Gayana, Bot.* 59(1): 30 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (308, Fig 201 as *Stipa*).

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

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths red. Culms erect or geniculately ascending, 50–60 cm long, 1–1.5 mm diam., 2–3 -noded. Culm-nodes swollen, brown, glabrous. Leaf-sheaths scaberulous, glabrous on surface or pubescent, outer margin glabrous or hairy. Ligule an eciliate membrane, 5 mm long, 1 mm long on basal shoots, acute. Leaf-blades curved, conduplicate, 15–25 cm long, 1 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex acuminate, mucicous or pungent.

Inflorescence. Inflorescence a panicle, comprising 10–25 fertile spikelets. Panicle open, oblong, 15–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 7–15 mm long, 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, subterete, 37–45 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 2.5–3 mm long, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 37–45 mm long, 1.1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex attenuate. Upper glume lanceolate, 32–41 mm long, membranous, without keels, 3 -veined. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 12–14 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 130–190 mm long overall, with twisted column. Column of lemma awn 12–23 mm long, plumose, with 10 mm long hairs. Palea 0.5 length of lemma, 0 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 3, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza. La Pampa. Neuquén.

Pappostipa braun-blanquetii (F.A.Roig) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 183 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa braun-blanquetii* Roig, *Phytocoenologia*, 2(1–2): 19 (1975). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, San Rafael: Ruiz Leal 27150.

Recent Synonyms: *Jarava braun-blanquetii* (F.A.Roig) Penail., *Contr. U. S. Natl. Herb.* 48: 403 (2003).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Josias Braun-Blanquet (1884–1980) French-Swiss vegetation scientist.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 25–28 cm long, 0.5–0.7 mm diam., 2 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes swollen, glabrous. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule an eciliate membrane. Leaf-blades curved, conduplicate, 1 mm wide, stiff. Leaf-blade apex acuminate, pungent.

Inflorescence. Inflorescence a panicle, comprising 15–25 fertile spikelets. Panicle open, oblong, 8–9 cm long, 1 cm wide, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 22–23 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 2 mm long, glabrous, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 22–23 mm long, 1 length of upper glume, hyaline, without keels. Lower glume apex acuminate. Upper glume lanceolate, 22–23 mm long, hyaline, without keels. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 11–11.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 0.7–0.8 mm long or 3–4 mm long (at tip). Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 19–21 mm long overall, with 11–12 mm long limb, with twisted column. Column of lemma awn 9 mm long, plumose. Palea 6.5 mm long.

Flower and Fruit. Caryopsis with adherent pericarp, fusiform, 7.5 mm long.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza.

Pappostipa chrysophylla (E.Desv.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 185 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa chrysophylla* E.Desv., C. Gay, *Fl. Chil.* 6: 278. t. 76. f. 2 (1853). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Chile, Guanta: Gay ; Chile, Coquimbo: Gay 376 (P syn, K, US).

Recent Synonyms: *Jarava chrysophylla* (E.Desv.) Penail., Gayana, *Bot.* 59(1): 31 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (308, Fig 204 as *Stipa*).

Illustrations (Journals): *Ruizia* (13:70, Fig 8a (1993) as *Stipa*).

Derivation (Clifford & Bostock 2007): Gk. chrysos, yellow; phyllon, leaf. Leaf-blades golden-yellow.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Butt sheaths yellow, glabrous or pubescent. Culms erect or geniculately ascending, 15–40 cm long, 2–4 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes glabrous. Ligule an eciliate membrane, 5 mm long. Leaf-blades filiform, conduplicate, 10–30 cm long, 0.5 mm wide. Leaf-blade surface scaberulous, glabrous.

Inflorescence. Inflorescence a panicle, comprising 10–20 fertile spikelets. Panicle open, linear, dense, 6–9 cm long, 0.5–1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 5–10 mm long, scabrous, ciliate, hairy at tip.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 14–29 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, curved, 1.5–2 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 14–29 mm long, 1.05 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 13–28 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 6–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy all along or below. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 25–60 mm long overall, with twisted column. Column of lemma awn 10–22 mm long, plumose, hairy generally, with 5–10 mm long hairs. Palea 5–6 mm long, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3. Anthers 3, yellow, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 6–7 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Peru. Argentina South, Chile North, Chile Central.

TDWG4. Catamarca, La Rioja, Mendoza, Salta, San Juan. La Pampa. Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Tarapaca, Antofagasta, Atacama. Coquimbo, Valparaiso, Santiago, O'Higgins, Maule, La Araucania.

Pappostipa chubutensis (Speg.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 185 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa chubutensis* Speg., *Anal. Mus. Montevid.* 4: II. 49 (1901). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Chubut Teka Choque: Mauri (BAA holo, K, US).

Recent Synonyms: *Jarava chubutensis* (Speg.) Penail., *Gayana, Bot.* 59(1): 31 (2002).

Illustrations (Books): M.N.Corraea, *Flora Patagonica* Parte III, Gramineae (1978) (302, Fig 194 as *Stipa*).

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

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths dark brown. Culms 15–35 cm long, 2–3-noded. Culm-nodes swollen. Leaf-sheaths mostly shorter than adjacent culm internode. Leaf-sheath oral hairs ciliate, 1.5 mm long. Ligule a ciliolate membrane. Leaf-blades straight or curved, deciduous at the ligule, filiform, conduplicate, 8–20 cm long, 1 mm wide. Leaf-blade surface smooth. Leaf-blade apex mucicous or pungent.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, oblong, dense, 5–11 cm long, 2–3 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, ciliate, hairy at tip.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 17–24 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1.5–2 mm long, pilose, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 17–24 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 17–24 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 7–9 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 27–50 mm long overall, with twisted column. Column of lemma awn 9–13 mm long, pubescent. Palea 5–6 mm long, 2 -veined, without keels. Palea surface pilose.

Flower and Fruit. Lodicules 3. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 6 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza. Chubut, Neuquén, Santa Cruz.

Pappostipa frigida (Phil.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 185 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa frigida* Phil., *Fl. Atac.* 54 (1860). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile, Altos de Puquios: Philippi (SGO holo).

Recent Synonyms: *Jarava frigida* (Phil.) F.Rojas, *Gayana, Bot.* 54(2): 173 (1998).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. cold. Growing at high altitudes.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 15–30 cm long, 2-noded. Ligule an eciliate membrane, 3–5 mm long, pubescent on abaxial surface. Leaf-blades filiform, convolute, 5–20 cm long, 0.5 mm wide. Leaf-blade surface ribbed, glabrous.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle open, linear, 2–6 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 16–24 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 16–24 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 5–8 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy all along. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn geniculate, 12–20 mm long overall, with twisted column. Column of lemma awn 7–10 mm long, plumose, with 5–6 mm long hairs. Palea 4–7 mm long, 1 length of lemma, 2 -veined, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3, 2–3 mm long. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 4 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina Northwest, Chile North, Chile Central.

TDWG4. Catamarca, Jujuy, La Rioja, Mendoza, Salta, San Juan. Tarapaca, Antofagasta, Atacama. Coquimbo, Santiago, Maule.

Pappostipa hieronymusii (Pilg.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 183 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa hieronymusii* Pilger, *Engl. Jahrb. Ivi. Beibl.* 123, 24 (1920). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Laguna Brava: Hieronymus & Niederlein 314 (B holo, CORD).

Recent Synonyms: *Jarava hieronymusii* (Pilg.) Penail., *Gayana, Bot.* 59(1): 31 (2002).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of George Hans Emmo Wolfgang Hieronymus (1846–1921) German botanist, sometime resident of Argentina.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms 15–25 cm long, 1 -noded. Leaf-sheaths 4–8 cm long, pubescent. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane. Leaf-blades convolute, 7–25 cm long, 0.8 mm wide, stiff. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex acute, pungent.

Inflorescence. Inflorescence a panicle, terminal or terminal and axillary, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Panicle contracted, linear, 4–15 cm long. Panicle axis puberulous. Panicle branches puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 17–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 17–22 mm long, 1 length of upper glume, membranous, much thinner on margins, purple, without keels. Lower glume apex attenuate. Upper glume lanceolate, 17–22 mm long, membranous, with hyaline margins, purple, without keels. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 8–9 mm long, coriaceous, yellow, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 1.5 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 18–25 mm long overall, with 10–15 mm long limb, with twisted column. Column of lemma awn 10 mm long, plumose, with 5–6 mm long hairs. Palea 5 mm long.

Flower and Fruit. Anthers 3, 4.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Catamarca, La Rioja, Salta.

Pappostipa humilis (Cav.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 185 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa humilis* Cav., *Ic.* v. 41. t. 466. f. 1 (1799). T:<Type of Basionym>; *fide* TROPICOS and Kew Synonymy Database: Chile, Puerto Deseado: Nee (MA holo).

Recent Synonyms: *Jarava humilis* (Cav.) Penail., *Gayana, Bot.* 59(1): 31 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (314, Fig 205 as *Stipa*).

Derivation (Clifford & Bostock 2007): L. low growing. Short-statured in comparison with related species often prostrate.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Butt sheaths yellow. Culms 20–40 cm long, 1 mm diam., 2–3 -noded. Culm-internodes smooth, distally glabrous or pubescent. Culm-nodes brown, glabrous. Leaf-sheaths smooth, glabrous on surface, outer margin hairy. Ligule an eciliate membrane or a ciliolate membrane, 3–4 mm long, 0.2–0.3 mm long on basal shoots, acute. Leaf-blades filiform, conduplicate, 10–30 cm long, 0.5 mm wide. Leaf-blade surface ribbed, scaberulous, glabrous.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, 5–9 cm long, 0.5–1 cm wide, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–7 mm long, scabrous, tip widened.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 18–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.5–2 mm long, pilose, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 18–22 mm long, 1.05 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume apex attenuate. Upper glume lanceolate, 16–20 mm long, membranous, without keels, 3 -veined. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 7–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 35–75 mm long overall, with twisted column. Column of lemma awn 12–25 mm long, plumose, hairy on upper part, with 8–10 mm long hairs. Palea 4–5 mm long, 2 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 3, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 6–7 mm long, dark brown. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile South.

TDWG4. Mendoza. La Pampa. Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. Tarapaca, Antofagasta, Atacama, Coquimbo, Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso, Chiloe, Aisen, Magellanes. Aisen, Magellanes.

Pappostipa ibarii (Phil.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 184 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa ibarii* R. Phil., *Anal. Univ. Chil.* 93: 716 (1896). T:<Type of Basionym>; *fide* TROPICOS and Kew Synonymy Database: Chile, Lake Pinto: Ibar (SGO holo, , B).

Recent Synonyms: *Jarava ibarii* (Phil.) Penail., *Gayana, Bot.* 59(1): 31 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (302, Fig 196 as *Stipa ibarii*).

Derivation (Clifford & Bostock 2007): in honor of Enrique Ibar (fl. 1877–78) who collected in Patagonia.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths yellow. Culms erect or geniculately ascending, 7–20 cm long, 0.5 mm diam., 1–2 -noded. Culm-internodes distally pubescent. Culm-nodes swollen, pubescent. Leaf-sheaths mostly shorter than adjacent culm internode, pubescent. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades straight or curved, conduplicate, 3–10 cm long, 0.5 mm wide. Leaf-blade surface pubescent.

Inflorescence. Inflorescence a panicle, comprising 4–15 fertile spikelets, embraced at base by subtending leaf. Panicle open, oblong, 4–9 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–7 mm long, 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, subterete, 17–23 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 17–23 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein eciliate or ciliolate. Lower glume apex acuminate. Upper glume lanceolate, 17–23 mm long, membranous, 1-keeled, 3 -veined. Upper glume primary vein eciliate or ciliolate. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 7–9 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma hairs 1 mm long. Lemma apex dentate, 2 -fid, with lobes 1 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 21–44 mm long overall, with twisted column. Column of lemma awn 7–14 mm long, plumose. Palea 1 length of lemma, 2 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 6–7 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile South.

TDWG4. Mendoza. Chubut, Neuquén, Santa Cruz. Magellanes.

Pappostipa maeviae (F.A.Roig) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 183 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa maeviae* FA. Roig, *Bol. Soc. Argent. Bot.*, 14(4): 314 (1972). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Volcan Domuyo: Boelck 11290 (BAA holo, BAB).

Recent Synonyms: *Jarava maeviae* (F.A.Roig) Penail., *Gayana, Bot.* 59(1): 31 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (297, Fig 192 as *Stipa*).

Derivation (Clifford & Bostock 2007): in honor of Maevia Noimi Correa, Argentine botanist.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths red, pilose. Culms 5–7 cm long, 2 -noded. Culm-internodes distally hirsute. Culm-nodes constricted. Leaf-sheaths longer than adjacent culm internode, pubescent. Ligule a ciliolate membrane, 2 mm long, 0.25–0.5 mm long on basal shoots, pubescent on abaxial surface, acute. Leaf-blades curved or flexuous, conduplicate, 10–20 cm long, 1 mm wide, stiff. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, comprising 6–7 fertile spikelets, shorter than basal leaves, embraced at base by subtending leaf. Panicle open, oblong, 3 cm long, 1–1.5 cm wide, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 3–7 mm long, villous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 18–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1.5–2 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 18–22 mm long, 1.05 length of upper glume, membranous, without keels, 1 -veined. Lower glume primary vein ciliate. Lower glume lateral veins absent. Lower glume surface puberulous. Lower glume apex acuminate. Upper glume lanceolate, 17–20 mm long, membranous, without keels, 3 -veined. Upper glume primary vein ciliate. Upper glume surface puberulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 7–8 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma hairs 3–4 mm long. Lemma apex dentate, 2 -fid, with lobes 2 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 16–20 mm long overall, with twisted column, limb glabrous. Column of lemma awn 7–9 mm long, plumose. Palea 2.6–3 mm long, 0 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Neuquén.

Pappostipa major (Speg.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 184 (2008).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa speciosa* fo. *major* Speg., *Anales Mus. Nac. Montevideo* 4(2): 58, f. 10a-b (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina: vulgata prope Lago Nahuel-huapi, Jan 1900 (Fernández) & in Valle Trollope, Neuquen, Feb 1900 (Asp), *E. Fernández s.n. & Otto Asp.*

Recent Synonyms: *Jarava speciosa* var. *major* (Speg.) Parodi, *Contr. U.S. Natl. Herb.* 48:407 (2003).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Pooideae. Tribe: Stipeae.

Pappostipa malalhuensis (F.A.Roig) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 184 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa malalhuensis* F.A.Roig, *Rev. Fac. Cicnc. Agrar. Univ. Nac. Cuyo*, 11 60 (1966). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Poti Malal: Ruiz Leal 20938 (MERL holo).

Recent Synonyms: *Jarava malalhuensis* (F.A.Roig) Penail., *Gayana, Bot.* 59(1): 31 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (304, Fig 200 as *Stipa*).

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

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial. Butt sheaths yellow, glabrous. Culms 30–40 cm long, 1 mm diam., 2–3 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes flush with internodes, brown, glabrous. Leaf-sheath oral hairs lacking or pubescent. Ligule an eciliate membrane, 3 mm long, 1 mm long on basal shoots. Leaf-blades conduplicate, 15–25 cm long, 1 mm wide. Leaf-blade surface glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, comprising 15–25 fertile spikelets. Panicle open, oblong, 8–15 cm long, 0.5–1 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 8–14 mm long, ciliate, hairy above.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 29–32 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 3 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 29–32 mm long, 1.05 length of upper glume, membranous, without keels. Lower glume apex attenuate. Upper glume lanceolate, 27–31 mm long, membranous, without keels. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 10–12 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 90–110 mm long overall, with twisted column. Column of lemma awn 17–18 mm long, plumose, with 4–5 mm long hairs. Palea 6–8 mm long, 0–1 -veined, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3. Anthers 3, yellow, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza. Chubut.

Pappostipa nana (Speg.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 184 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa nana* Speg., *Rev. Argent. Bot.* 1: 23 (1925). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Lake Schuenaiken: Spegazzini (LP holo).

Recent Synonyms: *Jarava nana* (Speg.) Penail., *Gayana, Bot.* 59(1): 32 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (308, Fig 203 as *Stipa*).

Derivation (Clifford & Bostock 2007): L. dwarf. Smaller than related species.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 7–13 cm long, 2–3 -noded. Culm-internodes smooth. Culm-nodes glabrous. Ligule an eciliate membrane, 1 mm long, 0.5 mm long on basal shoots, acute. Leaf-blades curved, conduplicate, 3–4 cm long, 0.5–1 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 3–5 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–7 mm long, 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, subterete, 15–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1.8–2 mm long, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 15–18 mm long, 1 length of upper glume, membranous, without keels. Lower glume apex acuminate. Upper glume lanceolate, 15–18 mm long, membranous, without keels. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 6.5–7.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 23–28 mm long overall, with twisted column. Column of lemma awn 9–10 mm long, plumose. Palea 5 mm long, 0 -veined, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3. Anthers 3, yellow, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Chubut, Santa Cruz.

Pappostipa nicorae (F.A.Roig) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 183 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa nicorae* F.A. Roig, *Giorn. Bot. Ital.*, 121: 41 (1987). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Reserva de San Guillermo: Nicora, Guaglianone & Ragonese 9201 (SI holo, LP).

Recent Synonyms: *Jarava nicorae* (F.A.Roig) Penail. *Gayana, Bot.* 59(1): 32 (2002).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Elisa Gernaela Nicora de Panza (1912-) Argentinian botanist.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 10–19 cm long, 2 -noded. Culm-nodes swollen, glabrous. Leaf-sheaths longer than adjacent culm internode, smooth, glabrous on surface. Leaf-sheath oral hairs pubescent. Ligule an eciliate membrane. Leaf-blades convolute, 0.4–0.5 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate, pungent.

Inflorescence. Inflorescence a panicle, comprising 9–12 fertile spikelets, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Panicle open, linear, 3–7 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–8 mm long, 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, subterete, 19–26 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1.2–1.8 mm long, glabrous, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 19–26 mm long, 1 length of upper glume, membranous, much thinner on margins, yellow, 1-keeled, 3 -veined. Lower glume primary vein ciliolate. Lower glume surface pubescent. Lower glume apex acuminate. Upper glume linear, 19–26 mm long, membranous, with hyaline margins, yellow, 1-keeled, 3 -veined. Upper glume primary vein ciliolate. Upper glume surface pubescent. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 7–8 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 3 mm long. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 20–50 mm long overall, with 19–20 mm long limb, with twisted column. Column of lemma awn 10–13 mm long, plumose. Palea 6–7 mm long, 0 -veined. Palea surface hirsute.

Flower and Fruit. Caryopsis with adherent pericarp, 4–4.5 mm long.

Distribution (TDWG). Continent. South America.

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

TDWG4. Catamarca, Mendoza, San Juan.

Pappostipa parodiana (F.A.Roig) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 183 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa parodiana* F.A.Roig, *Rev. Fac. Cienc. Agrar. Univ. Nac. Cuyo*, 11: 44 (1966). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Argentina, Malalhue: Ruiz Leal 21453 (MERL holo).

Recent Synonyms: *Jarava parodiana* (F.A.Roig) Penail., *Gayana, Bot.* 59(1): 32 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (304, Fig 199 as *Stipa*).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Lorenzo Raimondo Parodi (1895–1966) Argentinian agrostologist.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths red, pilose. Culms 30–40 cm long, 1 mm diam., 2–3 -noded. Culm-internodes distally pilose, with reflexed hairs. Culm-nodes swollen, purple, glabrous. Leaf-sheaths mostly shorter than adjacent culm internode. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 3 mm long, 0.5 mm long on basal shoots, acute. Leaf-blades 1 mm wide.

Inflorescence. Inflorescence a panicle, comprising 14–18 fertile spikelets. Panicle open, linear, 10–15 cm long, 1.5–2 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 4–10 mm long, ciliate, hairy above.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 34–48 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 2–3 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 34–48 mm long, 1.05 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex attenuate. Upper glume linear, 32–38 mm long, membranous, without keels, 3 -veined. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 11–13 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 1 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 50–70 mm long overall, with twisted column. Column of lemma awn 18–25 mm long. Palea 2.3–5 mm long, without keels.

Flower and Fruit. Lodicules 3. Anthers 3, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza. La Pampa. Neuquén, Río Negro.

Pappostipa patagonica (Speg.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 183 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa patagonica* Speg., *Agron. La Plata*, 1897, 581 (1897). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Argentina, Rio Santa Cruz: Spegazzini (LPS syn).

Recent Synonyms: *Jarava patagonica* (Speg.) Penail. *Gayana, Bot.* 59(1): 32 (2002).

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths red or purple. Basal innovations intravaginal. Culms geniculately ascending, 22–40 cm long, 0.6–1.4 mm diam., 2 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes constricted, glabrous. Leaf-sheaths glabrous on surface or pilose, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.5–2 mm long, 0.2–0.3 mm long on basal shoots, pubescent on abaxial surface, truncate. Collar pubescent. Leaf-blades erect, straight or curved, deciduous at the ligule, filiform, conduplicate, 5–20 cm long, 0.8–1 mm wide, stiff. Leaf-blade surface pubescent, hairy adaxially or on both sides. Leaf-blade margins ciliate. Leaf-blade apex attenuate, pungent.

Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Panicle contracted, oblong, 5–10 cm long, bearing few spikelets. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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, subterete, 20–33 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2.5–3 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 20–33 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex attenuate. Upper glume lanceolate, 20–33 mm long, membranous, without keels, 3–5 -veined. Upper glume apex attenuate.

Florets. Fertile lemma linear, subterete, 10–13.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 35–55 mm long overall, with 25–45 mm long limb, with twisted column. Column of lemma awn 8–10 mm long, plumose, with 7–10 mm long hairs. Palea linear, 1 length of lemma, 2 -veined. Palea surface pubescent, hairy on back, hairy in the middle.

Flower and Fruit. Lodicules 3, 1.5–3 mm long. Anthers 3, 5–5.5 mm long. Caryopsis with adherent pericarp, fusiform, 8–8.5 mm long, dark brown. Embryo 0.33 length of caryopsis. Hilum linear, 1 length of caryopsis.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza. La Pampa. Chubut, Neuquén, Río Negro, Santa Cruz.

Pappostipa ruizlealii (F.A.Roig) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 183 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa ruizlealii* F.A.Roig, *Rev. Fac. Cienc. Agrar. Univ. Nac. Cuyo*, 11: 42 (1966). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Argentina, Paramillo to Uspallata: Ruiz-Leal 20774.

Recent Synonyms: *Jarava ruizlealii* (F.A.Roig) Penail., *Gayana, Bot.* 59(1): 32 (2002).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Adrian Ruiz Leal (fl. 1933–1942) who collected in Argentina.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 25–30 cm long. Culm-internodes distally pubescent. Culm-nodes constricted, brown, glabrous. Leaf-sheaths longer than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.5–1 mm long, hyaline. Leaf-blades filiform, convolute, 1 mm wide, stiff. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, comprising 8–15 fertile spikelets. Panicle open, oblong, 6–9 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 2–3 mm long, bearded, acute.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 15–20 mm long, 1 length of upper glume, hyaline, much thinner above, much thinner on margins, purple, without keels. Lower glume apex acuminate. Upper glume lanceolate, 15–20 mm long, 1.5–2 length of adjacent fertile lemma, hyaline, much thinner above, with hyaline margins, purple, without keels. Upper glume apex acuminate.

Florets. Fertile lemma linear to lanceolate, subterete, 10–11 mm long, coriaceous, light brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, surmounted by a ring of hairs, with this appendage 3–4 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 22–33 mm long overall, with 11–19 mm long limb, with twisted column. Column of lemma awn 11–14 mm long, plumose, with 5–6 mm long hairs. Palea 9–10 mm long, 0.9 length of lemma, 2 -veined, 1-keeled.

Flower and Fruit. Anthers 3, purple. Stigmas 2. Caryopsis with adherent pericarp, fusiform, 9 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza.

Pappostipa semperiana (F.A.Roig) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 183 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa semperiana* F.A.Roig, *Rev. Fac. Cienc. Agrar. Univ. Nac. Cuyo*, 11: 37 (1966). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Uspallata to Puesto San Alberto: Ruiz-Leal 11138.

Recent Synonyms: *Jarava semperiana* (F.A.Roig) Penail., *Gayana, Bot.* 59(1): 32 (2002).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Juan Semper (fl. 1944–1945) who collected in Argentina.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 20–50 cm long, 1.5–2 mm diam. Culm-internodes distally pubescent. Culm-nodes black, glabrous. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 2–4 mm long, hyaline. Leaf-blades filiform, convolute, 1 mm wide. Leaf-blade surface pubescent, densely hairy, hairy adaxially. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle, comprising 20–25 fertile spikelets. Panicle open, oblong, 8–10 cm long, 3–5 cm wide, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete, 29–32 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 2 mm long, pubescent, pungent.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 29–32 mm long, 1.1 length of upper glume, hyaline, without keels. Lower glume apex attenuate. Upper glume lanceolate, 27–28 mm long, 2.5 length of adjacent fertile lemma, hyaline, without keels. Upper glume apex attenuate.

Florets. Fertile lemma linear to lanceolate, subterete, 10–13 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, surmounted by a ring of hairs, with this appendage 3–4 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5–75 mm long overall, with 40–55 mm long limb, with twisted column. Column of lemma awn 16–20 mm long, plumose, with 5–6 mm long hairs. Palea 5–6 mm long, 0.5 length of lemma, 2 -veined, without keels.

Flower and Fruit. Anthers 3, yellow. Stigmas 2. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza. La Pampa.

Pappostipa sorianoii (Parodi) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 184 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa sorianoii* L. Parodi, *Rev. Argent. Agron.* 27: 94 (1960). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Santa Cruz: Soriano 4775 (BAA holo).

Recent Synonyms: *Jarava sorianoii* (Parodi) Penail., *Gayana, Bot.* 59(1): 33 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (308, Fig 202 as *Stipa*).

Derivation (Clifford & Bostock 2007): in honor of Alberto Soriano (fl. 1960) Argentinian agriculturalist.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths yellow, pubescent. Culms 15–20 cm long, 0.3–0.5 mm diam., 2–3 -noded. Culm-internodes antrorsely scabrous. Culm-nodes glabrous. Leaf-sheaths 5–7 cm long. Ligule an eciliate membrane, acute. Leaf-blades filiform, conduplicate, 8–10 cm long, 0.3–0.4 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, comprising 10 fertile spikelets, exerted or embraced at base by subtending leaf. Panicle open, lanceolate, 3–7 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–7 mm long, scabrous, ciliate, hairy above.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 19–26 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 2 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 19–26 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral

veins absent. Lower glume apex attenuate. Upper glume lanceolate, 19–26 mm long, membranous, without keels, 3 -veined. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 8–9 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 2 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 30–40 mm long overall, with twisted column. Column of lemma awn 11–14 mm long, plumose, with 5–6 mm long hairs. Palea 5–6 mm long, 2 -veined, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3. Anthers 3, yellow or purple, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Chubut, Santa Cruz.

Pappostipa speciosa (Trin. & Rupr.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 182 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa speciosa* Trin. & Rupr., *Mem. Acad. Petersb.* Ser. VI. Sc. Nat. 5: 45 (1842). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H. Cuming s.n.*, Chile (LE-TRIN-1443.01; IT: US-557434 (fragm. ex LE)).

Recent Synonyms: *Jarava speciosa* (Trin. & Rupr.) Penail., *Gayana, Bot.* 59(1): 33 (2002). *Achnatherum speciosum* (Trin.) Nevski, *Acta Inst. Bot. Acad. Sci. URSS*, Ser. 1, Fasc. 4, 224 (1937), in obs. ; Ohwi in *Journ. Jap. Bot.* xvii. 404 (1941).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (180), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (262, Fig 67 as *Stipa*), M.N.Correra, *Flora Patagonica* Parte III, Gramineae (1978) (297, Fig 193 as *Stipa*).

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

Derivation (Clifford & Bostock 2007): L. species, beauty; -osa, abundance. Showy in some respect, in particular the inflorescence.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths dark brown, pubescent. Culms erect, 25–90 cm long. Culm-nodes brown. Leaf-sheaths longer than adjacent culm internode. Leaf-sheath oral hairs lacking to pubescent. Ligule an eciliate membrane. Collar glabrous. Leaf-blades filiform, conduplicate, 5–42 cm long, 0.7–0.8 mm wide. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle open, nodding, 7–14 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate, hairy all along but hairs longer above.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 25–40 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 3–3.5 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, hyaline, without keels, 3–5 -veined. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 25–40 mm long, 2–2.5 length of adjacent fertile lemma, hyaline, without keels, 3–5 -veined. Upper glume surface asperulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 11–14 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy all along. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 1–1.5 mm long, pubescent, surmounted by a ring of hairs, with this appendage 0.5–1 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 40–85 mm long overall, with 20–70 mm long limb, with twisted column, deciduous, limb glabrous. Column of lemma awn 10–25 mm long, plumose, with 5–10 mm long hairs. Palea 4.5–5 mm long, 0.33–0.5 length of lemma, 2 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 3, 4.5–5 mm long, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 8–12 mm long, light brown. Hilum linear, 1 length of caryopsis.

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

Country /Province /State. Northwest USA, Southwestern USA, South-central USA, Mexico. Colorado. Arizona, California, Nevada, Utah. Northwest Mexico. **Western South America** and **Southern South America.** Bolivia, Ecuador. Argentina Northwest, Argentina Northeast, Argentina South, Chile North, Chile Central.

TDWG4. Catamarca, Mendoza, San Juan. Buenos Aires, La Pampa. Chubut, Neuquén, Río Negro, Santa Cruz. Tarapaca, Antofagasta, Atacama. Coquimbo, Valparaiso, Santiago, Maule, Biobio. Baja California, Baja California Sur.

Pappostipa vaginata (Phil.) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 182 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa vaginata* Phil., *Linnaea*, 33: 281 (1864). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile, San Felipe: Landbeck (SGO iso).

Recent Synonyms: *Jarava vaginata* (Phil.)F. Rojas, *Gayana, Bot.* 54(2): 173 (1998).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (304, Fig 198 as *Stipa vaginata* var. *argyroidea*).

Derivation (Clifford & Bostock 2007): *L. vagina*, sheath; -ata, possessing. Leaf-sheaths conspicuous.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths dark brown, pilose. Culms 50–70 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking or ciliate. Ligule an eciliate membrane, 10–15 mm long. Collar glabrous. Leaf-blades flexuous, persistent or deciduous at the ligule, filiform, 9–40 cm long, 0.7–1 mm wide. Leaf-blade surface scaberulous, glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, nodding, 10–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, glabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 17–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1.5–2 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, hyaline, without keels, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex attenuate. Upper glume lanceolate, 17–25 mm long, 2–2.5 length of adjacent fertile lemma, hyaline, without keels, 1–3 -veined. Upper glume lateral veins absent or distinct. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 7–11 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy all along or below. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 1.5–2.5 mm long, pubescent, surmounted by a ring of hairs, with this appendage 2–4 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 20–46 mm long overall, with 19–30 mm long limb, with twisted column, deciduous, limb glabrous. Column of lemma awn 11–16 mm long, plumose, with 5–10 mm long hairs. Palea 0.66 mm long, 5.5–6 length of lemma, 2 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 3, 4 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 6 mm long, dark brown. Hilum linear, 1 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina South, Argentina Northwest, Chile North, Chile Central, Paraguay.

TDWG4. Jujuy, La Rioja, Mendoza, Salta, San Juan. Buenos Aires, La Pampa. Neuquén, Río Negro. Tarapaca, Antofagasta. Coquimbo, Valparaiso, Santiago.

Pappostipa vatroensis (F.A.Roig) Romaschenko. *J. Bot. Res. Inst. Texas* 2: 184 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa vatroensis* F.A.Roig, *Rev. Fac. Cienc. Agrar. Univ. Nac. Cuyo*, 11: 40 (1966). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Malalhue: Ruiz-Leal 21501 (MERL holo).

Recent Synonyms: *Jarava vatroensis* (F.A.Roig) Penail., *Gayana, Bot.* 59(1): 33 (2002).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (302, Fig 195 as *Stipa*).

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

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Stolons present. Butt sheaths dark brown, pubescent. Culms 40–50 cm long, 3–4 -noded. Culm-internodes smooth or scaberulous, distally pubescent. Culm-nodes brown, glabrous. Leaf-sheaths mostly shorter than adjacent culm internode or longer than adjacent culm internode, pilose. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 6 mm long, 1

mm long on basal shoots. Leaf-blades flexuous, filiform, conduplicate, 10–15 cm long, 1 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, comprising 20–25 fertile spikelets. Panicle open, linear, 20–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–4 mm long, villous, hairy at tip, with 3 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 36–45 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 2.5–3 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 36–45 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 34–40 mm long, membranous, without keels, 3 -veined. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 14–18 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 100–165 mm long overall, with twisted column. Column of lemma awn 7–21 mm long, hirsute, hairy on lower part. Palea 9–13 mm long, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3. Anthers 3, yellow, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 9 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza. La Pampa. Neuquén, Santa Cruz.

Parabambusa kainii Widjaja. *Reinwardtia* 11(2): 121 (1997).

Accepted by: 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: Irian Jaya, Yapen-Waropen District, Kainui, S. Enaweni, *Widjaja 6642* (HT: BO; IT: K, L, US).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped loosely. Rhizomes short, pachymorph. Butt sheaths absent. Culms leaning, 1500–2000 cm long, 10–30 mm diam., woody, without nodal roots. Culm-internodes terete, thin-walled, 50–65 cm long, mid-green, distally pruinose. Lateral branches dendroid, arising from upper culm. Bud complement 1. Branch complement three or several, in a clump, with 1 branch dominant, thinner than stem. Culm-sheaths present, deciduous but leaving a persistent girdle (this scabrid), 12–13 cm long, glabrous, auriculate, with obtuse auricles, with 2–3 mm high auricles, setose on shoulders, shoulders with 6–10 mm long hairs. Culm-sheath ligule 2–3 mm high, dentate. Culm-sheath blade triangular, narrower than sheath, erect, 13.5–14.5 cm long, 45–55 mm wide, glabrous on surface. Leaf-sheath oral hairs setose, 5–8 mm long. Leaf-sheath auricles erect, 0.7 mm long. Ligule an eciliate membrane, 1 mm long, erose. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 26.5–31 cm long, 39–60 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, with spathaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile Spikelets. Spikelets comprising 5–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 25–52 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 1–3 mm long, glabrous.

Glumes. Glumes two, persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume ovate. Lower glume apex acute. Upper glume ovate. Upper glume apex acute.

Florets. Fertile lemma ovate, 9.5–12.5 mm long, without keel, more than 3-veined. Lemma margins ciliate. Lemma apex acuminate. Palea 10–13.5 mm long. Palea apex acute. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules absent. Anthers 6. Stigmas 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuaasia. New Guinea.

Paractaenum novae-hollandiae Beauv. *Agrost.* 47. t. 10 (1812).

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).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Leschenault s.n.*, Australia: Iles Steriles [probably Shark's Bay], 1802 (BM).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (465, Fig 399 as subsp. *reversum*), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (247, Pl 73), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (319), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (324), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Illustrations (Journals): *Kew Bulletin* (1923: 288 (1923)).

Derivation (Clifford & Bostock 2007): from New Holland, now Australia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or decumbent, 30–60 cm long. Ligule a ciliolate membrane, 2–3 mm long. Leaf-blades 3–10 cm long, 2–6 mm wide, flaccid.

Inflorescence. Inflorescence composed of racemes. Racemes 3–12, borne along a central axis, deflexed or spreading, unilateral, 1–6 cm long, bearing few fertile spikelets, bearing 1–4 fertile spikelets on each. Central inflorescence axis 5–12 cm long, flattened. Rhachis deciduous from axis, narrowly winged, angular, scabrous on margins, terminating in a barren extension, extension subulate. Spikelet packing abaxial, distant. Raceme-bases cuneate, 3–7 mm long. Spikelets appressed, subtended by an involucre. Fertile spikelets pedicelled, 1 in the cluster. Involucre composed of bristles, 3.5–10 mm long. Involucral bristles deciduous with the fertile spikelets, few, 1 per spikelet (absent from distal spikelets), antrorsely scaberulous. Pedicels present, oblong, 0.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 3.5–5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3–7 -veined. Lower glume apex truncate or obtuse. Upper glume ovate, membranous, without keels, 11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 9–11 -veined, acute. Fertile lemma elliptic, 4 mm long, coriaceous, without keel. Lemma surface striate or punctate. Lemma margins involute. Palea coriaceous.

Flower and Fruit. Lodicules 2, cuneate, 0.6 mm long, fleshy, truncate. Anthers 3, 1.75 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province/State. Australia. Western Australia, Northern Territory, South Australia, Queensland, New South Wales.

TDWG4. Eremean. Central Australia. NW & Lake Eyre, Southern. Inland. Western Plains.

Parafestuca albida (Lowe) E.B.Alekseev. *Byull. Mosk. Obshch. Ispyt. Prir., Biol.*, 90(5): 108 (1985).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Madeira. **Basionym or Replaced Name:** *Festuca albida* Lowe, *Trans. Cambridge Philos. Soc.* 4: 10 (1831). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *R. T. Lowe s.n.*, 5 Jun 1828, Madeira: Ribeiro Frio, Ribeira d'Metade (K-307994). LT designated by Quintanar, Catalan & Castroviejo, *Taxon* 55(3): 668 (2006).

Recent Synonyms: *Koeleria loweana* Quintanar, Catalán & Castro., *Taxon* 55(3): 668 (2006).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. whitish. Plant in whole or in part white usually due to an indumentum of short hairs.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Basal innovations intravaginal. Culms 25–100 cm long. Culm-internodes distally pubescent. Ligule an eciliate membrane, 0.8–2 mm long. Leaf-blades flat or convolute, 20–50 cm long, 3–10 mm wide.

Inflorescence. Inflorescence a panicle. Peduncle pubescent above. Panicle contracted, lanceolate, 15–35 cm long. Panicle branches pilose. 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, 6–8(–10) mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent. Floret callus pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5.5–8 mm long, 0.9 length of upper glume, membranous, without keels, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 6.5–9 mm long, 0.9 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acute.

Florets. Fertile lemma obovate, 6–9 mm long, chartaceous, much thinner on margins, without keel, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma surface asperulous. Lemma apex acute. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, glabrous, 2-toothed. Anthers 3, 2.5–3.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum elliptic, 0.2–0.25 length of caryopsis.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Macaronesia. Madeira.

Parahyparrhenia annua (Hack.) Clayton. *Kew Bull.* xx. 434 (1966).

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

TYPE from Sudan. **Basionym or Replaced Name:** *Andropogon annuus* Hack., *Flora* 68(8): 137 (1885)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.A. Schweinfurth 183. III*, 1885, Sudan (W; IT: P, US-76095).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. annual. Annuals.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 30–160 cm long. Leaf-sheath auricles erect, 2–5 mm long. Ligule an eciliate membrane, 2–5 mm long. Leaf-blades 5–45 cm long, 1–6 mm wide.

Inflorescence. Inflorescence composed of racemes, subtended by a spatheole. Spatheole linear, 6–15 cm long, herbaceous. Racemes (1–)2, paired, 2–6 cm long, bearing few fertile spikelets, bearing 4–7 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform. Rhachis internode tip oblique, flat. Raceme-bases filiform, unequal (the longer measured), 3–6 mm long, glabrous. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2 in number (lower raceme), 0 in upper racemes, barren, smaller than fertile. Basal sterile spikelet lower glume muticous, lemmas awnless.

Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas or containing empty lemmas or male, lanceolate, 5–11 mm long, as long as fertile, separately deciduous. Companion sterile spikelet callus indistinct or oblong (0–0.5 mm), obtuse. Companion sterile spikelet glumes coriaceous, awned, with 1–9 mm long awn.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 5–12 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1–4 mm long, pilose, base pungent, attached obliquely. Spikelet callus hairs white or red.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels. Lower glume surface with a longitudinal median groove. Upper glume oblong, coriaceous. Upper glume muticous or awned, awn 0–10 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliate on margins. Fertile lemma oblong, 4 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma margins ciliolate, hairy above. Lemma apex dentate, 2 -fid, incised 0.1 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 35–100 mm long overall, with twisted column. Column of lemma awn pubescent. Palea absent or minute.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa. Burkina, Ghana, Ivory Coast, Mali, Senegal, Sierre Leone. Central African Republic. Chad, Sudan.

Parahyparrhenia bellariensis (Hack.) Clayton. *Kew Bull.* 27(3): 448 (1972).

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) (as *Heteropogon*).

TYPE from India. **Basionym or Replaced Name:** *Andropogon bellariensis* Hack., *Flora* 68(7): 123 (1885). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Wright 2321*, no date, India: Mysore (K, US-76448 (fragm. ex L)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Bellary, Deccan Plateau, India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Caespitose. Culms erect, 60–90 cm long. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 7–20 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes, subtended by a spatheole, enclosed. Spatheole linear, 8–9 cm long, herbaceous. Racemes 1, single, 5–6 cm long, bearing few fertile spikelets, bearing 9–12 fertile spikelets on each. Rhachis fragile at the nodes, flattened, ciliate on margins. Rhachis internodes filiform. Rhachis internode tip oblique, flat. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, flattened, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 4–6 in number, male, lanceolate, equalling fertile. Basal sterile spikelet lower glume mucous, lemmas awnless.

Companion sterile spikelets well-developed, male, lanceolate, 8 mm long, longer than fertile, separately deciduous. Companion sterile spikelet callus square, obtuse. Companion sterile spikelet glumes coriaceous, 7 -veined, mucous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, subterete, 8–9 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1–1.5 mm long, pilose, base acute, attached obliquely. Spikelet callus hairs white.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, without keels, keel-less except near apex. Lower glume surface with a longitudinal median groove. Lower glume apex dentate, 2 -fid. Upper glume lanceolate, coriaceous. Upper glume margins ciliolate. Upper glume mucous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma linear, 3 mm long, chartaceous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, incised 0.1 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 25–40 mm long overall, with twisted column. Column of lemma awn hirsute, hairy on the spiral, with 1–1.5 mm long hairs. Palea absent or minute.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Tamilnadu.

Parahyparrhenia laegaardii Veldkamp. *Blumea* 48:499 (2003).

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

TYPE from Thailand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Thailand, Ubong Ratchathani: Laegaard et al. 21836 (AAU holo, QBG).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Simon Laegaard (1933-) Danish botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Basal innovations intravaginal. Culms 70–95 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades ascending or spreading or reflexed, flat or involute, 5.5–12.5 cm long, 2–3.5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, subtended by a spatheole. Spatheole linear, herbaceous. Racemes 1–2, single or paired, 3–7 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear, 3–4 mm long, 0.66 length of fertile spikelet. Rhachis internode tip oblique, flat. Raceme-bases filiform, subequal, 6.5–9 mm long, glabrous. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 4–5 mm long.

Sterile Spikelets. Basal sterile spikelets well-developed, 8–14 in number.

Companion sterile spikelets well-developed, containing empty lemmas or male, linear, shorter than fertile, separately deciduous. Companion sterile spikelet callus linear, 1–2 mm long, obtuse. Companion sterile spikelet glumes coriaceous, sulcate, awned, one glume awned (upper), with 5 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes, 1-awned, with 8 mm long awn.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 6–6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1.8–2.5 mm long, pubescent, base pungent, attached obliquely. Spikelet callus hairs white, 0.5 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 5–6.5 mm long, 1 length of spikelet, coriaceous, without keels, 3(–4) -veined. Lower glume surface with a longitudinal median groove, pilose, hairy above. Lower glume apex dentate, 2 -fid. Upper glume elliptic, 6–6.5 mm long, coriaceous, 1 -veined. Upper glume lateral veins absent. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 7–8.5 mm long.

Florets. Basal sterile florets 1, with vestigial lower floret. Fertile lemma oblong, 6 mm long, hyaline, without keel, 0–3 -veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 45–52 mm long overall, with 20–25 mm long limb, with twisted column, limb puberulous. Column of lemma awn 25–27 mm long, puberulous. Palea lanceolate, 4 mm long.

Flower and Fruit. Anthers 3, 2.8–3.7 mm long, yellow.

Distribution (TDWG). Continent. Tropical Asia.

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

Parahyparrhenia perennis Clayton. *Kew Bull.* xx. 436 . (1966).

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

TYPE from Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Guinea, Conakry: Adam 12595 (K holo).

Illustrations (Books): F.N.Hepper, *F.W.T.A.* 3(2) (1972) (497, Fig.457).

Derivation (Clifford & Bostock 2007): L. persisting for several years. Perennials.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–80 cm long, 1 mm diam. Leaf-sheath auricles erect, 2 mm long. Ligule an eciliate membrane, 2 mm long. Leaf-blades filiform, convolute, 10–30 cm long, 1–1.5 mm wide.

Inflorescence. Inflorescence composed of racemes, subtended by a spatheole. Spatheole linear, 6–9 cm long, herbaceous. Racemes 2, paired, 3 cm long, bearing few fertile spikelets, bearing 4–7 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform. Rhachis internode tip oblique, flat, with lobed rim. Raceme-bases filiform, unequal (the longer measured), 4 mm long, glabrous. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2 in number (lower raceme), 0 in upper racemes, barren, larger than fertile. Basal sterile spikelet lower glume muticous, lemmas awnless.

Companion sterile spikelets well-developed, comprising 2 subequal glumes without lemmas or containing empty lemmas or male, lanceolate, 5–6 mm long, as long as fertile, separately deciduous. Companion sterile spikelet callus indistinct, obtuse. Companion sterile spikelet glumes coriaceous, awned, with 0.7–3 mm long awn.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 4.5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 0.8–1.3 mm long, pilose, base pungent, attached obliquely. Spikelet callus hairs red.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels. Lower glume surface with a longitudinal median groove. Upper glume oblong, coriaceous. Upper glume awned, awn 6–10 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 2 -veined, ciliolate on margins. Fertile lemma oblong, 3 mm long, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma margins ciliolate, hairy above. Lemma apex dentate, 2 -fid, incised 0.1 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 2.7–3.4 mm long overall, with twisted column. Column of lemma awn pubescent. Palea absent or minute.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Guinea, Liberia, Senegal.

Parahyparrhenia siamensis Clayton. *Dansk Bot. Arkiv*, xxvii. No. 1, 69 . (1969).

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

TYPE from Thailand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Thailand, Satul: Kerr 13715 (K holo, BKF).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Siam, now Thailand.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50 cm long. Leaf-sheaths pilose. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades involute, 5–12 cm long, 1–1.5 mm wide. Leaf-blade surface pilose, hairy on both sides.

Inflorescence. Inflorescence composed of racemes, subtended by a spatheole. Spatheole linear, 9–11 cm long, herbaceous. Racemes 1–2, single or paired, 4–5 cm long, bearing few fertile spikelets, bearing 4–7 fertile spikelets on each. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform. Rhachis internode tip oblique, flat. Raceme-bases filiform, subequal, 7 mm long, glabrous. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, ciliate.

Sterile Spikelets. Basal sterile spikelets absent.

Companion sterile spikelets well-developed, male, linear, 5–6 mm long, shorter than fertile, separately deciduous. Companion sterile spikelet callus oblong (0.5mm), obtuse. Companion sterile spikelet glumes coriaceous, sulcate, pilose (above), awned, one glume awned (upper), with 2–3 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes, 1-awned, with 3 mm long awn.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 8–9.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 2–3 mm long, pilose, base pungent, attached obliquely. Spikelet callus hairs white.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, without keels, 6 -veined. Lower glume surface with a longitudinal median groove, pilose, hairy above. Lower glume margins ciliate. Lower glume apex mucronate, 2 -awned, awn 1.5 mm long. Upper glume elliptic, coriaceous, 5 -veined. Upper glume margins ciliate. Upper glume awned, awn 6–9 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.5–3.5 mm long, hyaline. Fertile lemma oblong, 3 mm long, hyaline, without keel, 0–3 -veined. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 40–50 mm long overall, with twisted column. Column of lemma awn hispidulous, hairy on the spiral. Palea absent or minute.

Flower and Fruit. Anthers 3, 4 mm long.

Distribution (TDWG). Continent. Tropical Asia.

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

Parahyparrhenia tridentata Clayton. *Kew Bull.*, 35(4): 816 (1981).

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

TYPE from Thailand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Thailand: Sam Roi Yawt, *Put 2480* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. tria, three; dens, tooth; -ata, possessing. One or both glumes three-toothed.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–70 cm long. Ligule an eciliate membrane. Leaf-blades 5–13 cm long, 1–3 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, subtended by a spatheole. Spatheole linear, 4–5 cm long, herbaceous. Racemes 1, single, 1.5 cm long, bearing few fertile spikelets, bearing 5–7 fertile spikelets on each. Rhachis fragile at the nodes, pubescent on margins. Rhachis internodes filiform. Rhachis internode tip oblique, flat. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, glabrous.

Sterile Spikelets. Basal sterile spikelets well-developed, 2–4 in number, barren. Basal sterile spikelet lower glume muticous, lemmas awnless.

Companion sterile spikelets well-developed, lanceolate, 5 mm long, shorter than fertile, separately deciduous. Companion sterile spikelet callus indistinct, obtuse. Companion sterile spikelet glumes herbaceous, lobed (tridentate), muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete, 6–8 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1 mm long, pilose, base acute, attached obliquely. Spikelet callus hairs dark brown.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, without keels. Lower glume surface convex. Lower glume apex dentate, 3 -fid. Upper glume lanceolate, coriaceous. Upper glume muticous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3–4 mm long, hyaline. Fertile lemma linear, 4–5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 20–35 mm long overall, with twisted column. Column of lemma awn pubescent. Palea absent or minute.

Distribution (TDWG). Continent. Tropical Asia.

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

Paraneurachne muelleri (Hack.) S. T. Blake. *Contrib. Queensl. Herb.*, 13: 21 (1972).

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:** *Neurachne muelleri* Hack., *Prodr.* 196 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: *Mueller* (W holo, MEL).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (503, Fig 432), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (272, Pl 78 as *Neruachne clementii*), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (326), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Illustrations (Journals): *Contr.Qld.Herb.* (13:44, Fig.4 (1972)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): in honor of Ferdinand Jacob Heinrich Mueller (1825–96) German-born Australian botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe NEURACHNINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms erect, 30–45 cm long, 0.7–1.2 mm diam. Culm-nodes pubescent. Leaf-sheaths pubescent, outer margin hairy. Ligule a fringe of hairs, 0.5–0.8 mm long. Leaf-blades 1–12 cm long, 2–4 mm wide. Leaf-blade surface pubescent. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong, 2.7–3.5 cm long, 1.5–2.5 cm wide. Primary panicle branches accrescent to a central axis, with lateral stumps on axis. Panicle axis pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, 0.25–0.7 mm long, tip oblique.

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, 7.4–12 mm long, falling entire. Spikelet callus bearded. Spikelet callus hairs 0.5 length of spikelet.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume ovate, 0.8–1 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume lateral veins ribbed. Lower glume margins setose (above). Lower glume apex acuminate, awned, 1 -awned, awn 1–1.5 mm long. Upper glume ovate, 7.4–12 mm long, coriaceous, much thinner above, without keels, 11–13 -veined. Upper glume surface pubescent, hairy below. Upper glume margins ciliate. Upper glume apex acuminate, awned, 1 -awned, awn 0.35–2.5 mm long.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, gibbous, 5.5–7 mm long, 0.75 length of spikelet, coriaceous, much thinner above, 7 -veined, ribbed, puberulous, acute. Fertile lemma ovate, 5.5–7 mm long, cartilaginous, much thinner above, without keel, 5–7 -veined, more than 3-veined. Lemma apex rostrate. Palea 1 length of lemma, cartilaginous, 2 -veined.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 3.5–4.35 mm long. Stigmas 2. Caryopsis with adherent pericarp, obovoid, dorsally compressed, 2.1–3.25 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

$2n = 36$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, South Australia, Queensland.

TDWG4. Kimberley, Ereman. Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre. North, Central, Inland.

Parapholis filiformis (Roth) C.E.Hubb. *Blumea, Suppl.* 3, 14 (1946).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), T.G.Tutin et al, *Flora Europaea* 5 (1980).

TYPE from Germany. **Basionym or Replaced Name:** *Rottboellia filiformis* Roth, *Supplementum Plantarum* 13, 114 (1781) [1782]. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Germany, Cult. by Roth: Schreber (K iso).

Illustrations (Books): N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 336).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 5–25 cm long. Ligule an eciliate membrane. Leaf-blades convolute, 1–2 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, ragged or smoothly terete, bilateral, 5–10 cm long, bearing 10–20 fertile spikelets on each. Rhachis fragile at the nodes, subcylindrical and excavated. Spikelet packing broadside to rhachis, lax. Rhachis internodes oblong, 0.9 length of fertile spikelet. Rhachis internode tip transverse. Spikelets sunken, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–6 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes collateral, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 4–6 mm long, 1 length of upper glume, coriaceous, 1-keeled, winged on keel, 3–5 -veined. Lower glume lateral veins ribbed. Lower glume apex acuminate. Upper glume lanceolate, 4–6 mm long, 1.1 length of adjacent fertile lemma, coriaceous, 1-keeled, winged on keel, 3–5 -veined. Upper glume lateral veins ribbed. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 3.5–5.5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma apex obtuse. Palea 1 length of lemma. Palea surface scaberulous.

Flower and Fruit. Anthers 3, (2–)2.5–3.5 mm long. Caryopsis with adherent pericarp, ellipsoid, 3 mm long. Hilum elliptic. Endosperm liquid.

$2n = 14$ (1 ref TROPICOS).

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

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

Country /Province /State. : GB Aliens (Ryves et al). : Balears, Corsica, France, Portugal, Sardinia, Spain. : Albania, Greece, Italy, Crete, Sicily, Turkey Europe, Yugoslavia. **Northern Africa, Macaronesia.** Algeria, Egypt, Morocco. Madeira. **Western Asia.** East Aegean Is, Palestine, Israel & Jordan, Turkey.

Parapholis gracilis Bor. *Notes Roy. Bot. Gard. Edinb.* xxv. 63 (1963).

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

TYPE from Iraq. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Iraq, Kirkuk: Helbaek 1293 (K holo).

Illustrations (Books): N.L.Bor, *Gramineae in Flora of Iraq* (1968) (267, Pl. 92).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, slender, 15–30 cm long. Culm-internodes smooth, distally glabrous. Ligule an eciliate membrane. Leaf-blades 0.3–6 cm long, 1–1.5 mm wide, flaccid. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight, smoothly terete, bilateral, 6–18 cm long. Rhachis fragile at the nodes, subcylindrical and excavated. Spikelet packing broadside to rhachis. Rhachis internodes oblong. Rhachis internode tip transverse. Spikelets sunken, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4.5–5.5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes collateral, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 4.5–5.5 mm long, 1 length of upper glume, coriaceous, without keels, 3 -veined. Lower glume lateral veins ribbed. Lower glume apex acuminate. Upper glume oblong, 4.5–5.5 mm long, 1.1 length of adjacent fertile lemma, coriaceous, without keels, 3 -veined. Upper glume lateral veins ribbed. Upper glume apex acuminate.

Florets. Fertile lemma elliptic or oblong, 4–4.5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Palea 1 length of lemma.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

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

Parapholis incurva (L.) C.E.Hubb. *Blumea*, *Suppl.* 3, 14 (1946).

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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), T.G.Tutin et al, *Flora Europaea* 5 (1980), N.Tsvelev, *Grasses of the Soviet Union* (1983).

Basionym or Replaced Name: *Aegilops incurva* L., *Sp. Pl.* 2: 1051 (1753). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: (LINN-1218.11). LT designated by Cuccuini in Cafferty et al., *Taxon* 49(2): 243 (2000).

Illustrations (Books): C.E.Hubbard, *Grasses* (1968) (342), N.N.Tsvelev, *Grasses of the Soviet Union* (1983) (309 (213), Pl.3), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (243, Fig. 153), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 335), L.Boulos, *Flora of Egypt* 4 (2005), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (269, Pl. 93), N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (596, Fig. 66), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982) (557, Fig. 62), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (140, Fig. 94), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (442, Fig. 86), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (320), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (350, Fig. 47), 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) (214, Fig. 7), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (688), F.W.Gould, *The Grasses of Texas* (1975) (176, Fig. 90), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (219, Fig. 65), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (162, Fig. 56), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (292, Fig. 74), M.N.Correa, *Flora Patagonica* Parte III, *Gramineae* (1978) (407, Fig. 271), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (91, Fig. 30), S-L Chen et al, *Flora of China*, *Illustrations*, *Poaceae* (2007) (Fig. 435).

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. bowed. Inflorescences curved spikes.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, 2–20 cm long. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades 0.4–3 cm long, 1–2 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, incurved, smoothly terete, bilateral, 1–8 cm long. Rhachis fragile at the nodes, subcylindrical and excavated, 1–2 mm wide. Spikelet packing broadside to rhachis, lax. Rhachis internodes oblong, 2.5–5 mm long. Rhachis internode tip transverse. Spikelets sunken, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–6 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes collateral, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 4–6 mm long, 1 length of upper glume, coriaceous, without keels, 3–4 -veined. Lower glume lateral veins ribbed. Lower glume apex acute. Upper glume lanceolate, 4–6 mm long, 1.1 length of adjacent fertile lemma, coriaceous, without keels, 3–4 -veined. Upper glume lateral veins ribbed. Upper glume apex acute.

Florets. Fertile lemma ovate, 3.5–5.5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins less than two thirds length of lemma. Lemma apex acute. Palea 1 length of lemma.

Flower and Fruit. Anthers 3, 0.5–1 mm long. Caryopsis with adherent pericarp, ellipsoid. Hilum elliptic. Endosperm liquid.

$N = 12$ (1 ref TROPICOS), or 21 (1 ref TROPICOS), or 19 (2 refs TROPICOS).

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

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

Country /Province /State. : Great Britain. : Belgium. : Balears, Corsica, France, Portugal, Sardinia, Spain. : Albania, Bulgaria, Greece, Italy, Crete, Sicily, Turkey Europe, Yugoslavia. Krym. **Northern Africa, Macaronesia, Southern Africa** (*). Algeria, Egypt, Libya, Morocco, Tunisia. Madeira. Northern Cape, Western Cape, Eastern Cape. **Middle Asia, Caucasus, Western Asia, Arabian Peninsula, China.** Turkmenistan, Tadjikistan, Uzbekistan. North Caucasus, Transcaucasus. Iran, Iraq. Gulf States, Kuwait, Oman. China Southeast. **Indian Subcontinent.** Pakistan. **Australia** (*), **New Zealand.** Western Australia (*), South Australia (*), New South Wales (*), A.C.T. (*), Victoria (*), Tasmania (*). New Zealand North I, New Zealand South I. **Northwest USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Oregon. California. Texas. Alabama, Louisiana, Maryland, Mississippi. Northwest Mexico. **Southern South America.** Argentina Northeast, Argentina South, Chile Central.

TDWG4. Fujian (*), Zhejiang (*). South-West. NW & Lake Eyre, Southern. Coast, Tablelands, Western Slopes, Western Plains. Buenos Aires, Distrito Federal, Entre Rios, La Pampa, Santa Fe. Chubut, Río Negro, Santa Cruz. Coquimbo, Valparaiso, Biobio. Baja California.

Parapholis marginata Runemark. *Bot. Notiser*, cxv. 8. 14 (1962).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), T.G.Tutin et al, *Flora Europaea* 5 (1980).

TYPE from Greece. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Greece, Cyclades, Sirina: Runemark & Nordenstam (LD holo).

Illustrations (Books): L.Boulos, *Flora of Egypt* 4 (2005) (154, Fig 43).

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

Derivation (Clifford & Bostock 2007): *L. margo*, border; *-ata*, possessing. Leaf-blades or lemma with hairs in their margins or the margins otherwise conspicuous.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 5–15 cm long. Leaf-sheaths inflated. Ligule an eciliate membrane. Leaf-blades convolute, 1–2 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Racemes 1, single, smoothly terete, bilateral, 2–6 cm long, bearing 5–10 fertile spikelets on each. Rhachis fragile at the nodes, subcylindrical and excavated. Spikelet packing broadside to rhachis, lax. Rhachis internodes oblong, 0.5–0.6 length of fertile spikelet. Rhachis internode tip transverse. Spikelets sunken, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–6 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes collateral, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate or ovate, 4–6 mm long, 1 length of upper glume, coriaceous, 1-keeled, winged on keel, 3–5 -veined. Lower glume lateral veins ribbed. Lower glume apex acute. Upper glume lanceolate or ovate, 4–6 mm long, 1.1 length of adjacent fertile lemma, coriaceous, 1-keeled, winged on keel, 3–5 -veined. Upper glume lateral veins ribbed. Upper glume apex acute.

Florets. Fertile lemma oblong, 3.5–5.5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea 1 length of lemma. Palea surface smooth.

Flower and Fruit. Anthers 3, 0.4–0.8 mm long. Caryopsis with adherent pericarp, ellipsoid, 2–2.5 mm long. Hilum elliptic. Endosperm liquid.

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

Region. Southwestern Europe, Southeastern Europe.

Country /Province /State. : Balears. : Greece, Crete, Sicily. **Northern Africa.** Egypt, Libya. **Western Asia.** Cyprus, Lebanon-Syria, Palestine, Israel & Jordan.

Parapholis pycnantha (Hack.) C.E.Hubb. *Blumea*, *Suppl.* 3, 14 (1946).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, T.G.Tutin et al, *Flora Europaea* 5 (1980).

TYPE from Britain. **Basionym or Replaced Name:** *Lepturus filiformis* var. *pycnanthus* Hack., *Rept. Bot. Exch. Cl. Brit. Is.* 1903:33 (1904). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Britain, Iver: Druce (W holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. pyknos, thick; anthos, flower. Spikelets relatively broad.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 15–35 cm long. Ligule an eciliate membrane. Leaf-blades flat, 1–2 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Racemes 1, single, ragged or smoothly terete, bilateral, 8–20 cm long, bearing 15–30 fertile spikelets on each. Rhachis fragile at the nodes, subcylindrical and excavated. Spikelet packing broadside to rhachis, lax. Rhachis internodes oblong, 0.5 length of fertile spikelet. Rhachis internode tip transverse. Spikelets sunken, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–9 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes collateral, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 6–9 mm long, 1 length of upper glume, coriaceous, without keels, 3–5 -veined. Lower glume lateral veins ribbed. Lower glume apex acuminate. Upper glume lanceolate, 6–9 mm long, 1.1 length of adjacent fertile lemma, coriaceous, without keels, 3–5 -veined. Upper glume lateral veins ribbed. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 5.5–8.5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea 1 length of lemma. Palea surface scaberulous.

Flower and Fruit. Anthers 3, 3.2–4 mm long. Caryopsis with adherent pericarp, ellipsoid, 3 mm long. Hilum elliptic. Endosperm liquid.

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

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

Country /Province /State. : GB Aliens (Ryves et al). : France, Portugal, Spain. : Greece, Italy. **Western Asia.** Turkey.

Parapholis strigosa (Dum.) C.E.Hubb. *Blumea*, *Suppl.* 3, 14 (1946).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) 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), T.G.Tutin et al, *Flora Europaea* 5 (1980).

TYPE from Belgium. **Basionym or Replaced Name:** *Lepturus strigosus* Dumort., *Observ. Gramin. Belg.* 146 (823) [1824]. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Belgium.

Illustrations (Books): C.E.Hubbard, *Grasses* (1968) (340), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (442, Fig 86), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (320), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (350, Fig. 47), 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) (688).

Derivation (Clifford & Bostock 2007): L. covered with short, bristle-like hairs. One or more organs covered with bristle-like hairs.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, 20–40 cm long. Ligule an eciliate membrane, 0.3–1 mm long. Leaf-blades 1–6 cm long, 1–2.5 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight, smoothly terete, bilateral, 2–20 cm long. Rhachis fragile at the nodes, subcylindrical and excavated, 1–1.5 mm wide. Spikelet packing broadside to rhachis, lax. Rhachis internodes oblong, 4–7 mm long. Rhachis internode tip transverse. Spikelets sunken, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes collateral, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 3–7 mm long, 1 length of upper glume, coriaceous, without keels, 3–5 -veined. Lower glume lateral veins ribbed. Lower glume apex acute. Upper glume lanceolate, 3–7 mm long, 1.1 length of adjacent fertile lemma, coriaceous, without keels, 3–5 -veined. Upper glume lateral veins ribbed. Upper glume apex acute.

Florets. Fertile lemma ovate, 2.5–5.5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins less than two thirds length of lemma. Lemma apex acute. Palea 1 length of lemma.

Flower and Fruit. Anthers 3, 2–4 mm long. Caryopsis with adherent pericarp, ellipsoid. Hilum elliptic. Endosperm liquid.

$2n = 28$ (2 refs TROPICOS).

Distribution (TDWG). Continent. Europe, Africa, Australasia (*), North America, South America.

Region. Northern Europe, Middle Europe, Southwestern Europe, Southeastern Europe.

Country /Province /State. : Denmark, Great Britain, Ireland, Sweden. : Belgium, Germany, Netherlands. : France, Portugal, Spain. : Italy, Yugoslavia. **Northern Africa.** Libya. **Australia, New Zealand.** New South Wales (*), Victoria (*), Tasmania (*). New Zealand North I. **Southwestern USA.** California. **Southern South America.** Chile Central, Chile South.

TDWG4. Western Plains. Biobio, La Araucania. Los Lagos.

Paratheria glaberrima C.E.Hubb. *Kew Bull.* 1949, 365 (1949).

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

TYPE from Sierra Leone. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.C. Deighton 4337*, 19 Jul 1946, Sierra Leone: Kambia District (K; IT: US-1984444).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. most free of hairs. Plant glabrous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Culms prostrate, 15–60 cm long. Culm-nodes glabrous. Leaf-sheaths keeled. Ligule a ciliolate membrane. Leaf-blades 2–3 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes, embraced at base by subtending leaf. Racemes 8–15, borne along a central axis, in a multilateral false spike, appressed, 2.5–4 cm long, bearing 1 spikelet. Central inflorescence axis 7–15 cm long. Rhachis deciduous from axis, smooth on margins, terminating in a barren extension, extension bristle-like. Spikelet packing abaxial. Raceme-bases linear, 10–15 mm long, glabrous, shed with the raceme, pungent. 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, acuminate, 20–27 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 2–3 mm long, 1 length of upper glume, 0.2 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 2–3 mm long, 0.2 length of adjacent fertile lemma, hyaline, without keels, 0 -veined. Upper glume primary vein absent. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of fertile lemma, membranous, 7–11 -veined, acuminate. Fertile lemma lanceolate, 10–12 mm long, cartilaginous, much thinner on margins, 7 -veined, more than 3-veined. Lemma margins flat. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Cleistogenes present, in upper sheaths.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Sierre Leone.

Paratheria prostrata Griseb. *Cat. Pl. Cub.* 236 (1866).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Wright 3906*, 1865, Cuba (GOET; IT: NY-71047, NY-71048).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (258, Fig. 189), G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):189, T. 49), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (279, Fig 102), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (354, Fig. 325), S.A.Renvoize, *Gramineas de Bolivia* (1998) (542, Fig 123), S.A.Renvoize, *The Grasses of Bahia*, 1984,

J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (209, Fig. 164), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (394, Fig 143a), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (439, Fig 78), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (76, Fig. 45).

Derivation (Clifford & Bostock 2007): L. prosterno, throw to the ground. Culms creeping or wiry so as to fall on the ground.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Culms prostrate, 15–60 cm long. Culm-nodes bearded. Leaf-sheaths keeled. Ligule a ciliolate membrane. Leaf-blades 2–7 cm long, 2–4 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence composed of racemes, embraced at base by subtending leaf. Racemes 8–15, borne along a central axis, in a multilateral false spike, appressed, (1.7–)3–5 cm long, bearing 1 spikelet. Central inflorescence axis 7–15 cm long. Rhachis deciduous from axis, scabrous on margins, terminating in a barren extension, extension bristle-like. Spikelet packing abaxial. Raceme-bases linear, 2–8 mm long, pilose (above), shed with the raceme, pungent. 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, acuminate, (8–)15–20 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1–2 mm long, 1 length of upper glume, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 1–2 mm long, 0.1 length of adjacent fertile lemma, hyaline, without keels, 0 -veined. Upper glume primary vein absent. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of fertile lemma, membranous, 7–11 -veined, acuminate. Fertile lemma lanceolate, (6–)10–12 mm long, cartilaginous, much thinner on margins, 7 -veined, more than 3-veined. Lemma margins flat. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Cleistogenes present, in upper sheaths.

N = 18 (1 ref TROPICOS).

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

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Burkina, Nigeria, Sierra Leone. DRC. Ethiopia (inc. Eritrea). Angola, Zambia. Namibia. Madagascar. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Costa Rica. Cuba, Dominican Republic. French Guiana, Guyana, Venezuela. Bolivia, Colombia. Brazil Southeast, Brazil North.

Pariana argentea V.C. Hollowell & G. Davidse. *Novon*, 2(2): 98 (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 Panama. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *T. B. Croat* 49139, 5 Dec 1979, Panama: Panamá: El Llano-Cartí road, 4 mi beyond the (Pan-American) Highway, 500 m, in shade of forest, spikes green, the stamens yellow (MO-2806084).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. silvery. Glumes or lemmas silvery.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Butt sheaths absent. Culms geniculately ascending, 20–40 cm long. Culm-internodes abbreviated and closely packed at the base, terete, thin-walled. Culm-nodes with distinct supra-nodal ridge, pallid or purple, glabrous. Culm-sheaths present. Leaves cauline, 7–10 per branch. Leaf-sheaths keeled, glabrous on surface or pubescent. Leaf-sheath oral hairs setose, spreading, 6–8 mm long. Ligule an eciliate membrane, 0.6–0.7 mm long, scarious, truncate. Leaf-blade base cuneate, with a brief petiole-like connection to sheath, petiole 0.15–0.25 cm long, petiole glabrous. Leaf-blades linear or lanceolate, 6–12 cm long, 8–16 mm wide, mid-green or glaucous, discolorous with last colour beneath. Leaf-blade surface glabrous. Leaf-blade apex acuminate or attenuate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 3–4.4 cm long, 10 mm wide, bearing 7 fertile spikelets on each. Rhachis fragile at the nodes. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a

cup, oblong. Pedicels present, fused to each other, united along margins, cuneate, flattened, 3.2–4 mm long, 0.66 length of fertile spikelet, 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 ovate, laterally compressed, compressed slightly, 5.3–6.1 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of upper glume, chartaceous, 1-keeled. Lower glume primary vein scaberulous. Lower glume apex acute. Upper glume ovate, 1.1 length of adjacent fertile lemma, chartaceous, 1-keeled. Upper glume primary vein scaberulous. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 4.5–5.2 mm long, coriaceous, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Lodicules 3, obovate, 1.5 mm long, membranous. Anthers 9–15, 2.6–2.8 mm long, yellow. Filaments united in a tube. Stigmas 2.

Male spikelets distinct from female, 1 flowered, ovate, 7.2–8.3 mm long. Male spikelet glumes 2. Male spikelet lemma 3.5–4 mm long, 2–3 -veined.

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

Country /Province /State. Mesoamerica. Panama.

Pariana aurita Swallen. *Journ. Wash. Acad. Sc.* . 73. (1940).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Y. Mexia 6116*, 17 Nov 1931, Peru: Loreto: above Pongo de Manseriche, mouth of the Río Santiago, 200 m, in dense forest, perennial herb, yellow stamens, alt. 200 m (US-1539376; IT: F, GH, K, MO-1168313, MO-1168314, US-2209351).

Illustrations (Journals): *Ruizia* (13:55, Fig. 6f (1993)).

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, 80–90 cm long. Leaves cauline. Ligule an eciliate membrane, 10–15 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 10–25 cm long, 5–7 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 5–7 cm long, 10 mm wide. Rhachis fragile at the nodes, terminating in a spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets (male), with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3–4 mm long, pubescent, tip rectangular.

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, laterally compressed, compressed slightly, 2.5–3 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2.5–3 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume apex acute. Upper glume ovate, 2.5–3 mm long, chartaceous, 1-keeled. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 2.5–3 mm long, coriaceous, without keel. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 3. Anthers 15, 2.5 mm long. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, oblong, 4 mm long, acute. Male spikelet glumes 2, linear or lanceolate, 2.5–3 mm long, awned (1mm). Male spikelet lemma 4 mm long, muticous.

N = 22 (1 ref TROPICOS).

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

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

Pariana bicolor Tutin. *Journ. Linn. Soc. Lond., Bot.* 1. 355 (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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Buchtien* 458, 17 Dec 1926, Bolivia: La Paz (US; IT: NY).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. bis, twice; color, color. Two-colored, usually with respect to spikelets or florets.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 40–80 cm long. Leaves cauline. Leaf-sheath oral hairs scanty or lacking. Ligule an eciliate membrane, 2–3 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long, petiole pubescent. Leaf-blades oblong or ovate, 12–22 cm long, 25–50 mm wide, mid-green or glaucous, discolorous with last colour beneath. Leaf-blade surface scabrous, rough abaxially, glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 7–9 cm long, 8–10 mm wide. Rhachis fragile at the nodes, terminating in a spikelet. Spikelet packing lax. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 2–3 mm long, puberulous or villous (at base), tip rectangular.

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, laterally compressed, compressed slightly, 6 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 6 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume margins ciliate. Lower glume apex obtuse. Upper glume ovate, 6 mm long, 1 length of adjacent fertile lemma, chartaceous, 1-keeled. Upper glume margins ciliate. Upper glume apex obtuse.

Florets. Fertile florets female. Fertile lemma ovate, 6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3. Anthers 25. Filaments united in a tube. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 3.5–4.5 mm long, glabrous or hairy. Male spikelet glumes 2, triangular, 2–2.5 mm long. Male spikelet lemma 3.5–4.5 mm long, 3 -veined, with cross-veins.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Bolivia, Colombia, Peru. Brazil North. Amazonas, Acre, Rondonia.

Pariana campestris Aubl. *Pl. Gui.* ii. 877. t. 337. (1775).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Aublet s.n.*, French Guiana: Cayenne (BM; IT: P, US-2877973 (fragm.)).

Illustrations (Books): E.J.Judziewicz et al, *American Bamboos* (1999) (295, Fig. 179), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (442, Fig. 79).

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

Derivation (Clifford & Bostock 2007): L. *campus*, plain; -estre, *place of growth*. Uncultivated.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 50–100 cm long. Leaves cauline. Ligule an eciliate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades elliptic or ovate, 10–25 cm long, 30–50 mm wide. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence composed of racemes, exserted. Racemes 1, single, erect, multilateral, 10–15 cm long. Rhachis fragile at the nodes, subterete. Spikelet packing crowded. Rhachis internodes linear. Rhachis internode tip cupuliform. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong, 6–8 mm long, base obconical. Pedicels present,

fused to each other, united along margins, cuneate, flattened, 2 mm long, 0.33 length of fertile spikelet, tip rectangular.

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, laterally compressed, compressed slightly, 6–7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 6–7 mm long, 1 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 6–7 mm long, 1.1 length of adjacent fertile lemma, chartaceous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5.5–6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea ovate, 1 length of lemma, coriaceous, 2 -veined, without keels. Palea apex acute.

Flower and Fruit. Lodicules 3, ciliate. Anthers 20. Filaments united in a tube. Stigmas 2. Ovary glabrous.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4–6 mm long. Male spikelet glumes 2. Male spikelet lemma 5 -veined.

Distribution (TDWG). Continent. South America.

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

Para, Amapa.

Pariana carvalhoi R.P.Oliveira & Longhi-Wagner. *Novon* 14(2): 208 (206–209; fig. 1) (2004).

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

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil, San Jose to Una: Carvalho et al. 4382 (CEPEC holo, ISC).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Andre Mauricio de Vieira de Carvalho (1951–2002) Brazilian botanist.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–75 cm long, 2–4 mm diam. Culm-internodes distally glabrous or pilose. Culm-nodes glabrous. Lateral branches lacking. Leaves cauline, 3–6 per branch. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs scanty or lacking. Ligule an eciliate membrane, 0.3–0.5 mm long. Leaf-blade base symmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate or ovate, 6–20 cm long, 21–34 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes, exserted. Racemes 1, single, erect, linear, multilateral, 6.5–8 cm long, 5–8 mm wide, bearing few fertile spikelets, bearing 6–8 fertile spikelets on each. Rhachis fragile at the nodes, subterete, scaberulous on margins. Rhachis internodes linear, 9–9.5 mm long. Rhachis internode tip cupuliform. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a long tube, oblong, 12.5–14 mm long, base obconical. Pedicels present, fused to each other, united along margins, oblong, flattened, 7–8.2 mm long, glabrous or ciliate, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, dorsally compressed, compressed slightly, 10–11.2 mm long, 2.6–3 mm wide, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 9–10 mm long, 1 length of upper glume, chartaceous, without keels. Lower glume apex acuminate. Upper glume oblong, 9–10 mm long, chartaceous, without keels. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma lanceolate or oblong, 9.5–11 mm long, 2–3 mm wide, coriaceous, light brown or dark brown, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, 2 -veined, without keels.

Flower and Fruit. Anthers 2. Hilum linear.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, oblong or ovate, 2–2.5 mm long, hairy. Male spikelet glumes 2, oblong or triangular, 2–2.5 mm long. Male spikelet lemma 3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Pariana concinna Tutin. *Journ. Linn. Soc. Lond., Bot.* 1. 358 (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Prov. Amazonas: Barra do Rio Negro (Manaos), in forest, Feb 1851, R. Spruce 1787 (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. elegant. Panicles or habit attractive.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–40 cm long, woody. Culm-nodes swollen. Leaves cauline. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3–0.4 cm long, petiole pubescent. Leaf-blades lanceolate, 12–14 cm long, 15–25 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 5.5 cm long, 5–6 mm wide. Rhachis fragile at the nodes, terminating in a sterile spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 2 mm long, glabrous, tip rectangular.

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, laterally compressed, compressed slightly, 5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 5 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 5 mm long, 1.2 length of adjacent fertile lemma, chartaceous, 1-keeled. Upper glume margins ciliate. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 4 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex obtuse. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3, glabrous. Anthers 15. Filaments united in a tube. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4–4.5 mm long, glabrous. Male spikelet glumes 2, linear, 3.5–4 mm long. Male spikelet lemma 4–4.5 mm long, with cross-veins.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Colombia. Brazil North.

Amazonas, Acre, Rondonia.

Pariana debilis Tutin. *J. Linn. Soc., Bot.* 50 (334): 361, f. 27 (1936).

Regarded by K as a synonym (*P. gleasonii*).

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 Guyana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: British Guiana: Potaro River, in the Gorge about a mile below Kaietuk Fall, shady stony ground sloping steeply to the river, 22 Aug 1933, Tutin 573 (HT: BM).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. weak. Culms decumbent often much branched at the base.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Distribution (TDWG). Continent. South America.

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

Pariana distans Swallen. *Journ. Wash. Acad. Sc.* . 73 (1940).

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: *J.R. Swallen* 3286, 19 Jan 1934–26 Jan 1934, Brazil: Pará (US-1614187).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. disto, be apart. Spikelets widely separated in inflorescence.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, 40 cm long. Culm-internodes antrorsely scabrous. Lateral branches lacking. Leaves cauline. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane, 2 mm long, pubescent on abaxial surface, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2 cm long, petiole pubescent. Leaf-blades lanceolate or oblong, 10–15 cm long, 18–25 mm wide. Leaf-blade surface scaberulous, rough adaxially, pubescent, hairy abaxially. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Peduncle pubescent above. Racemes 1, single, erect, oblong, multilateral, 9.4 cm long. Rhachis fragile at the nodes. Spikelet packing distant. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, cuneate, flattened, 3 mm long, puberulous, tip rectangular.

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, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, chartaceous, without keels. Lower glume apex acute. Upper glume ovate, chartaceous. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, coriaceous, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 7 mm long, hairy (glume margins and lemma). Male spikelet glumes 2, ovate, 4–5 mm long, 3 -veined. Male spikelet lemma 7 mm long.

Distribution (TDWG). Continent. South America.

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

Pariana ecuadorensis Pilger. *Notizbl. Bot. Gart. Berlin*, xiv. 323 (1939).

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 Ecuador. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H. Schultze-Rhnhof* 2275, Ecuador (B (fragm., US-2877972)).

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 20–40 cm long. Culm-internodes 4–9 cm long. Lateral branches lacking. Leaves cauline, 5 per branch. Leaf-sheath oral hairs setose, 10–20 mm long. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong or ovate, 6–11 cm long, 20–35 mm wide. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, oblong, multilateral, 9.5 cm long. Rhachis fragile at the nodes, flattened. Spikelet packing crowded. Rhachis internodes 5.5 mm long. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, cuneate, flattened, 3 mm long, puberulous, hairy at base, hairy on surface and margins, tip rectangular.

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, 5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, chartaceous, without keels, 1 -veined. Lower glume apex acute. Upper glume ovate, chartaceous, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 4 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea 1 length of lemma, coriaceous, 4 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 20. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, elliptic, 5.5 mm long. Male spikelet glumes 2, ovate, 3–3.5 mm long. Male spikelet lemma 6–7 mm long, 7 -veined.

Distribution (TDWG). Continent. South America.
Country /Province /State. Western South America, Brazil. Ecuador. Brazil North.

Pariana gleasonii Hitchcock. *Contrib. U. S. Nat. Herb.* xxii. 513 (1922).

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: HT: *H.A. Gleason 209*, 25–27 Jun 1921, Guyana: Potaro River, Potaro Landing, in dense upland bush (US-1064516).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Henry Allan Gleason (1882-) American botanist who collected in British Guiana, now Guyana.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms erect, 30–40 cm long. Lateral branches lacking. Leaves cauline, 1–3 per branch. Leaf-sheath oral hairs lacking or ciliate. Leaf-sheath auricles absent or erect. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3–0.5 cm long, petiole glabrous or pubescent. Leaf-blades lanceolate, 10–30 cm long, 25–80 mm wide, glaucous. Leaf-blade surface smooth, glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, oblong, multilateral, 3–7 cm long. Rhachis fragile at the nodes, subterete. Spikelet packing crowded. Rhachis internodes linear. Rhachis internode tip cupuliform. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 4–5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong, 8–10 mm long, base obconical. Pedicels present, fused to each other, united along margins, cuneate, flattened, 4–5 mm long, pubescent, hairy on margins or one margin, tip rectangular.

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, compressed slightly, 5.5–6 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–7 mm long, 1 length of upper glume, chartaceous, without keels, 1–2 -veined. Lower glume lateral veins absent or obscure. Lower glume surface glabrous or puberulous. Lower glume apex acute. Upper glume lanceolate, 5.5–6 mm long, chartaceous, without keels, 0–1 -veined. Upper glume primary vein absent or obscure. Upper glume lateral veins absent. Upper glume surface glabrous or puberulous. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, coriaceous, without keel. Lemma apex acute or apiculate. Palea 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Lodicules 3, 0.5–3 mm long. Anthers 6–8. Stigmas 2, terminally exerted. Caryopsis 4 mm long.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4.5–5.5 mm long, glabrous. Male spikelet glumes 2, 1–4 mm long. Male spikelet lemma 4.5–5.5 mm long, 1 -veined, without cross-veins or with cross-veins.

Distribution (TDWG). Continent. South America.

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

Pariana gracilis Doell. *Mart. Fl. Bras.* ii. II. 337. (1877).

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: LT: *Spruce 1787*, Brazil: habitat prope Manaus prov. de Atto Amazonas (K). LT designated by Tutin, J. Linn. Bot., Bot. 50(334): 359 (1936). ST: *d'Orbigny 147*, Bolivia: Majos (BR; IST: BR, P, US-2877970).

Illustrations (Journals): *Ruizia* (13:55, Fig. 6d (1993)).

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

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, slender, 30–40 cm long. Leaves cauline. Leaf-sheath oral hairs lacking. Leaf-sheath auricles erect. Ligule an eciliate membrane, 2–2.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate or oblong, 10–15 cm long,

20–25 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 8 cm long. Rhachis fragile at the nodes, terminating in a sterile spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 2.5–3 mm long, puberulous, tip rectangular.

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, laterally compressed, compressed slightly, 5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 5 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume apex acute. Upper glume ovate, 5 mm long, 1.2 length of adjacent fertile lemma, chartaceous, 1-keeled. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 4 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4–4.5 mm long. Male spikelet glumes 2, lanceolate, 2–3 mm long. Male spikelet lemma 4–4.5 mm long, without cross-veins or with cross-veins.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Bolivia, Colombia, Peru. Brazil North.

Pariana imberbis Nees. *Fl. Bras. Enum. Pl.* 2(1): 297 (1829).

Regarded by K as a synonym (*P. lunata*).

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. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Martius s.n.*, Brazil: Amazonas: Rio Negro, Manaus (M; IT: US-2877968 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. beardless. Glumes and/or lemmas glabrous.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 100–150 cm long. Leaves cauline. Leaf-sheaths ribbed, glabrous on surface or pubescent. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 2 mm long. Leaf-blade base broadly rounded, asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 20–27 cm long, 45–60 mm wide. Leaf-blade surface scabrous, rough abaxially. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 20 cm long, 10–15 mm wide. Rhachis fragile at the nodes. Spikelet packing crowded. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3 mm long, 1 length of internode, tip rectangular.

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, laterally compressed, compressed slightly, 7–8 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 7–8 mm long, 1 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume surface puberulous. Lower glume apex acuminate. Upper glume ovate, 7–8 mm long, 1.2–1.3 length of adjacent fertile lemma, chartaceous, 1-keeled, 3 -veined. Upper glume surface puberulous. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute, pubescent. Palea coriaceous, 0 -veined, without keels.

Flower and Fruit. Lodicules 3, cuneate. Anthers 20. Stigmas 2. Caryopsis trigonous, 3–4.5 mm long.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 7–8 mm long, hairy. Male spikelet glumes 2, oblong, 3–4 mm long. Male spikelet lemma 7–8 mm long, 3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.
Para, Amapa.

Pariana intermedia Doell. *Mart. Fl. Bras.* ii. II. 337. (1877).

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: *R. Spruce* 876, Brazil: Pará (M; IT: US-2877966).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. intermedia*. Having affinities with but distinct from other species.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 30–40 cm long, 2 mm diam. Leaves cauline. Leaf-sheaths puberulous. Leaf-sheath oral hairs setose. Ligule an eciliate membrane, 2–3 mm long, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long, petiole pubescent. Leaf-blades lanceolate, 6–11 cm long, 20–25 mm wide, mid-green or glaucous, discoloured with last colour beneath. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 8–10 cm long, 7–9 mm wide. Rhachis fragile at the nodes, terminating in a sterile spikelet. Spikelet packing lax. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3 mm long, pubescent, tip rectangular.

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, laterally compressed, compressed slightly, 7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate or oblong, 7 mm long, 1 length of upper glume, chartaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface puberulous, hairy at apex. Lower glume apex acute. Upper glume ovate, 7 mm long, 1.2 length of adjacent fertile lemma, chartaceous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface puberulous, hairy at apex. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3, 2 mm long. Anthers 10. Filaments united in groups. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 3.5–5 mm long, hairy. Male spikelet glumes 2, linear, 1–2.5 mm long. Male spikelet lemma 3.5–5 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.
Para, Amapa.

Pariana interrupta Tutin. *Journ. Linn. Soc. Lond., Bot.* 1. 348 (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Prov. Rio Negro: prope Barra (Manaos), 1855, *Spruce s.n.* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. not continuous*. Spikelets or inflorescence branches clustered at intervals along an axis.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 100 cm long. Leaves cauline. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 10–20 cm long, 30–40 mm wide, mid-green or mid-green or glaucous, discoloured with last colour beneath. Leaf-blade surface scabrous, rough abaxially, glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 8–10 cm long, 6–7 mm wide. Rhachis fragile at the nodes. Spikelet packing lax. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3–5 mm long, ciliate, hairy on surface, tip rectangular.

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, laterally compressed, compressed slightly, 7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 7 mm long, 1 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 7 mm long, 1.2 length of adjacent fertile lemma, chartaceous, 1-keeled, 3 -veined. Upper glume margins ciliate. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 3–4 mm long. Male spikelet glumes 2, triangular, 2–3 mm long. Male spikelet lemma 3–4 mm long, 1 -veined, without cross-veins.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Amazonas, Acre, Rondonia.

Pariana lanceolata Trin. *Mem. Acad. Petersb. Ser. VI. iii. II. 107.* (1835).

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: *Riedel s.n.*, 1831, Brazil: Bahia (LE-TRIN-3155.01; IT: LE-TRIN-3155.02, K).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (39, Fig.12).

Derivation (Clifford & Bostock 2007): *L. lanceus*, lance; -ola, diminutive; -ata, possessing. Mostly a reference to lanceolate leaf-blades.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25 cm long. Lateral branches lacking. Leaves cauline. Leaf-sheath oral hairs setose, 2–3 mm long. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear or lanceolate, 5–15 cm long, 7–120 mm wide. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes, exserted. Racemes 1, single, erect, linear, multilateral, 4 mm wide. Rhachis fragile at the nodes, subterete. Rhachis internodes linear, 10–13 mm long. Rhachis internode tip cupuliform. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a long tube, oblong, 11–13 mm long, base obconical. Pedicels present, fused to each other, united along margins, oblong, flattened, 8–10 mm long, pubescent, tip rectangular.

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, compressed slightly, 8–10 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 8–10 mm long, 1 length of upper glume, chartaceous, without keels. Lower glume apex acute. Upper glume oblong, 8–10 mm long, chartaceous, without keels. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma oblong, 8–10 mm long, coriaceous, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, 2 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 3. Stigmas 2, terminally exserted. Ovary glabrous.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 3 mm long, hairy. Male spikelet glumes 2. Male spikelet lemma 3 mm long.

N = 22 (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4. Bahia.

Pariana ligulata Swallen. *Journ. Wash. Acad. Sc.* 74 (1940).

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: *J.R. Swallen 3177*, 7 Jan 1934–13 Jan 1934, Brazil: Para (US-1613673).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. ligula*, small tongue; -ata, possessing. Ligule conspicuous.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–95 cm long. Lateral branches lacking. Leaves cauline. Leaf-sheaths keeled (above), reticulately veined. Ligule an eciliate membrane, 6–10 mm long, truncate or obtuse. Leaf-blade base with a brief petiole-like connection to sheath, petiole 6–10 cm long, petiole glabrous or pubescent. Leaf-blades oblong, 15–32 cm long, 30–40 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, drooping, oblong, multilateral, 12 cm long. Rhachis fragile at the nodes. Spikelet packing distant. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 4–5 mm long, puberulous, tip rectangular.

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, 9 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, chartaceous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous or pubescent, hairy at base. Lower glume apex acute. Upper glume ovate, chartaceous, 1 -veined. Upper glume lateral veins absent. Upper glume surface glabrous or puberulous, hairy at base. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 7 mm long, coriaceous, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Lodicules 3. Anthers 3 mm long. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 5–6 mm long. Male spikelet glumes 2, ovate, 1.5–2 mm long, 1–2 -veined. Male spikelet lemma 5–6 mm long, 3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Pariana longiflora Tutin. *Journ. Linn. Soc. Lond., Bot.* 1. 354 (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 Guyana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: British Guiana: Karau Creek, Mazaruni Station, in Mora forest, *Tutin 39* (HT: BM).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. longus*, long; flos, flower. Having long spikelets.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms erect, 40–60 cm long. Lateral branches lacking. Leaves cauline. Leaf-sheaths puberulous. Leaf-sheath oral hairs scanty or setose. Leaf-sheath auricles erect. Ligule an eciliate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath, petiole 0.3 cm long, petiole pubescent. Leaf-blades lanceolate or ovate, 10–15 cm long, 30–40 mm wide, glaucous. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes, subtended by a spatheole. Racemes 1, single, erect, oblong, multilateral, 10 cm long. Rhachis fragile at the nodes, subterete. Spikelet packing crowded. Rhachis internodes linear. Rhachis internode tip cupuliform. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong, 11–12 mm long, base obconical. Pedicels present, fused to each other, united along margins, cuneate, flattened, 2 mm long, ciliate, hairy on margins, tip rectangular.

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, compressed slightly, 12–13 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–13 mm long, 1 length of upper glume, chartaceous, without keels, 5 -veined. Lower glume lateral veins obscure, without connecting veins. Lower glume surface puberulous. Lower glume apex acute. Upper glume lanceolate, 12–13 mm long, chartaceous, 1-keeled, 5 -veined. Upper glume lateral veins obscure. Upper glume surface puberulous. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 8 mm long, coriaceous, without keel. Lemma lateral veins obscure. Lemma apex acute. Palea 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Lodicules 3, 1 mm long, ciliate. Anthers 18. Stigmas 2, terminally exerted.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 9–10 mm long, hairy (ciliate). Male spikelet glumes 2, 8–9 mm long, 2–3 -veined. Male spikelet lemma 9–10 mm long, 3 -veined.

Distribution (TDWG). Continent. South America.

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

Pariana lunata Nees. *Agrost. Bras.* 295. (1829).

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>: *vide* TROPICOS and Kew Synonymy Database: Brasilia: habitat in sylvis juxta flumen Amazonum provinciae Paraensis, Febr, Martio,.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. luna, moon; -ata, possessing. Auricles crescent-shaped.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 100–150 cm long. Leaves cauline. Leaf-sheaths ribbed, glabrous on surface or pubescent. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 2 mm long. Leaf-blade base broadly rounded, asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 20–27 cm long, 45–60 mm wide. Leaf-blade surface scabrous, rough abaxially. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 20 cm long, 10–15 mm wide. Rhachis fragile at the nodes. Spikelet packing crowded. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3 mm long, 1 length of internode, tip rectangular.

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, laterally compressed, compressed slightly, 7–8 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 7–8 mm long, 1 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume surface puberulous. Lower glume apex acuminate. Upper glume ovate, 7–8 mm long, 1.2–1.3 length of adjacent fertile lemma, chartaceous, 1-keeled, 3 -veined. Upper glume surface puberulous. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute, pubescent. Palea coriaceous, 0 -veined, without keels.

Flower and Fruit. Lodicules 3, cuneate. Anthers 20. Stigmas 2. Caryopsis trigonous, 3–4.5 mm long.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 7–8 mm long, hairy. Male spikelet glumes 2, oblong, 3–4 mm long. Male spikelet lemma 7–8 mm long, 3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. French Guiana. Brazil North. Para, Amapa.

Pariana maynensis Huber. *Bol. Mus. Para.* iv. 526 (1906).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: NT: *J. Huber 4296*, Peru: Loreto: Cerro de Canchahuaya (MG-1440). NT designated by Hollowell, Fl. Mesoamer. 6: 217 (1994).

Illustrations (Books): No illustration found (BKS).

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

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 100–150 cm long, 5 mm diam. Culm-internodes distally pubescent. Culm-nodes swollen. Leaves cauline. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 5 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.7–0.8 cm long. Leaf-blades elliptic, 30–35 cm long, 60–90 mm wide, mid-green or glaucous, discolorous with last colour beneath. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 8–10 cm long. Rhachis fragile at the nodes. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3–4 mm long, ciliate, hairy at base, tip rectangular.

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, laterally compressed, compressed slightly, 7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 7 mm long, 1 length of upper glume, chartaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume ovate, 7 mm long, 1.2 length of adjacent fertile lemma, chartaceous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 6 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 9–10 mm long, glabrous. Male spikelet glumes 2, linear, 7–8 mm long. Male spikelet lemma 9–10 mm long, 1 -veined, without cross-veins.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, Brazil. Panama. Surinam, Venezuela. Colombia, Ecuador, Peru.

Pariana modesta Swallen. *Journ. Wash. Acad. Sc.* . 77. (1940).

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: *J.R. Swallen 3544*, 18 Feb 1934–26 Feb 1934, Brazil: Maranhão (US-1613666).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. moderate. Culms of average height.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms geniculately ascending, slender, 15–35 cm long. Culm-internodes distally glabrous. Leaves cauline. Leaf-sheaths mostly shorter than adjacent culm internode. Leaf-sheath oral hairs setose. Ligule an eciliate membrane, membranous. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 3–7.6 cm long, 5–14 mm wide. Leaf-blade surface scaberulous, rough adaxially, pubescent (sometimes obscure). Leaf-blade margins serrulate. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a specialized culm bearing a single leaf-blade.

Inflorescence composed of racemes, subtended by an inflated leaf-sheath. Racemes 1, single, erect, multilateral, 3–4 cm long, 6–8 mm wide. Rhachis fragile at the nodes. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 4 mm long, pubescent, tip rectangular.

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, laterally compressed, compressed slightly, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3–4 mm long, 1 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 3–4 mm long, 1 length of adjacent fertile lemma, chartaceous, 1-keeled, 3 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, coriaceous, without keel. Lemma surface scaberulous. Lemma apex acute. Palea 1–1.2 length of lemma, coriaceous, without keels. Palea apex acute.

Flower and Fruit. Lodicules 3. Anthers 15–25. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 5 mm long, hairy. Male spikelet glumes 2.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Pariana multiflora R.P. Oliveira, Longhi-Wagner & Hollowell. *Syst. Bot.* 33(2): 263, f. 1, 2, 4a, 5e,g-h. (2008)

Illustrations (Journals): *Systematic Botany* (33: 263, Fig. 1 (2008)).

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 65–90 cm long, 2 mm diam. Culm-nodes viscid. Lateral branches sparse. Leaves cauline, 10–15 per branch. Leaf-sheaths pilose, outer margin hairy. Leaf-sheath oral hairs setose, 5–18 mm long, dark. Ligule an eciliate membrane, 0.3–0.5 mm long. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.12–0.2 cm long. Leaf-blades lanceolate, 6–14 cm long, 12–19 mm wide, mid-green and purple, discolorous with last colour beneath. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade margins scaberulous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes, terminal and axillary (2–5 per culm), exserted. Racemes 1, single, erect, linear, multilateral, 3–7.5 cm long, 0.2–0.4 mm wide, bearing few fertile spikelets, bearing 5–10 fertile spikelets on each (in whorls with male spikelets). Rhachis fragile at the nodes, subterete, puberulous on surface, terminating in a sterile spikelet. Rhachis internodes linear, 13.5–14 mm long. Rhachis internode tip cupuliform. Sexes mixed (in a whorl at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a long tube, oblong, 13.5–15 mm long, base obconical. Pedicels present, fused to each other, united along margins, oblong, flattened, 7–10 mm long, pubescent, tip rectangular.

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, compressed slightly, 13.5–15 mm long, 2–2.5 mm wide, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume oblong, 10–12 mm long, 1 length of upper glume, chartaceous, without keels. Lower glume surface puberulous. Lower glume apex acuminate or caudate. Upper glume oblong, 10–12 mm long, chartaceous, without keels. Upper glume apex acuminate or caudate.

Florets. Fertile florets female. Fertile lemma lanceolate, 13.5–14.5 mm long, 1.8–2.4 mm wide, coriaceous, yellow, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, 2 -veined, without keels.

Flower and Fruit. Anthers 2, 1.8–2 mm long, yellow.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, lanceolate or oblong, 4–5 mm long, hairy (pubescent). Male spikelet glumes 2, lanceolate, 2–2.5 mm long. Male spikelet lemma 4–5 mm long, 3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Pariana nervata Swallen. *Journ. Wash. Acad. Sc.* . 71 (1940).

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: *J.R. Swallen 4873*, 15 Jun 1934, Brazil: Pará: Mosqueira (US-1613658).

Illustrations (Books): No illustration found (BKS).

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. Rhizomes short. Culms erect, 90–130 cm long. Lateral branches lacking. Leaves cauline. Leaf-sheaths longer than adjacent culm internode, glabrous on surface or pilose. Leaf-sheath oral hairs scanty. Leaf-sheath auricles erect. Ligule an eciliate membrane, 3 mm long, truncate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 15–26 cm long, 40–60 mm wide. Leaf-blade surface scabrous, rough abaxially. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes. Racemes 1, single, drooping, oblong, multilateral, 20 cm long, 13 mm wide. Rhachis fragile at the nodes. Spikelet packing crowded. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, cuneate, flattened, 3 mm long, puberulous, tip rectangular.

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, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 8 mm long, chartaceous, without keels, 3 -veined. Lower glume lateral veins with cross-veins. Lower glume surface asperulous. Lower glume apex acute. Upper glume ovate, 8 mm long, chartaceous, 3 -veined. Upper glume lateral veins with cross-veins. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 6 mm long, coriaceous, without keel. Lemma surface scaberulous, rough above. Lemma apex acute. Palea 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 6.5–8 mm long, hairy (glume margins). Male spikelet glumes 2, ovate, 5–6 mm long, 2–3 -veined. Male spikelet lemma 6.5–8 mm long, 5 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Pariana obtusa Swallen. *Mem. N. Y. Bot. Gard.* ix. 268 (1957).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *B. Maguire & L. Politi 27940*, 25 Dec 1948, Venezuela: Amazonas: Cerro Sipapo (NY-277638, IT: US-2553118 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. blunt*. Glumes or lemmas apically rounded.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 45 cm long. Leaves cauline. Leaf-sheaths glabrous on surface to pubescent. Leaf-sheath oral hairs setose, 10 mm long. Ligule an eciliate membrane, 1.5 mm long. Leaf-blade base cuneate or broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades lanceolate or ovate, 16–19.5 cm long, 5–5.5 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 8.5 cm long. Rhachis fragile at the nodes, terminating in a spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets (male), with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 1.7–3.5 mm long, pubescent, tip rectangular.

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, laterally compressed, compressed slightly, 5.7–6.4 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 5.7–6.4 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume apex acute. Upper glume ovate, 5.7–6.4 mm long, chartaceous, 1-keeled. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5–5.7 mm long, coriaceous, without keel. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 3. Anthers 15–18. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4–5.7 mm long, glabrous, acute. Male spikelet glumes 2, triangular, 1.1–3.7 mm long, muticous. Male spikelet lemma 4–5.7 mm long, muticous.

Distribution (TDWG). Continent. South America.

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

Pariana ovalifolia Swallen. *Journ. Wash. Acad. Sc.* . 72 (1940).

Accepted by: 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: *J.R. Swallen* 3379, 28 Jan 1934–01 Feb 1934, Brazil: Pará: 35 km N of Monte Alegre (US-1614216).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. ovum, egg; -ale, pertaining to; folium, leaf. Leaf-blades ovate.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 135 cm long. Lateral branches lacking. Leaves cauline. Leaf-sheaths reticulately veined, glabrous on surface. Leaf-sheath oral hairs scanty or lacking. Ligule an eciliate membrane, 2–4 mm long, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.5–0.8 cm long. Leaf-blades ovate, 17–24 cm long, 60–70 mm wide, mid-green and glaucous, discolorous with last colour beneath. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes. Racemes 1, single, drooping, oblong, multilateral, 16 cm long. Rhachis fragile at the nodes. Spikelet packing distant. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, cuneate, flattened, 3 mm long, tip rectangular.

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 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7 mm long, chartaceous, without keels, 3 -veined. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 7 mm long, chartaceous, 3 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 6 mm long, coriaceous, without keel. Lemma surface pubescent, hairy above. Lemma apex acute. Palea 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, oblong, 5–6 mm long, hairy (pubescent). Male spikelet glumes 2, ovate, 5–6 mm long, coriaceous, 1–2 -veined. Male spikelet lemma 5–6 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Pariana pallida Swallen. *Mem. N. Y. Bot. Gard.* ix. 268 (1957).

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: HT: *B. Maguire et al.* 29455, 6 Nov 1950, Venezuela: Amazonas (US-2040209; IT: F).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. pale-colored. Spikelets or grain pale-green.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 30–60 cm long. Lateral branches lacking. Leaves cauline, 10 per branch. Leaf-sheaths longer than adjacent culm internode, glandular (below throat), pubescent. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3 cm long, petiole pubescent. Leaf-blades oblong, 17–18 cm long, 30–43 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, oblong, multilateral, 6 cm long. Rhachis fragile at the nodes. Spikelet packing crowded. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, cuneate, flattened, 2.5 mm long, puberulous, hairy at base, tip rectangular.

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, 5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, chartaceous, without keels, 1–2 -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume ovate, chartaceous. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 4 mm long, coriaceous, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4.5–5 mm long. Male spikelet glumes 2, ovate, 5–6 mm long, 1–2 -veined. Male spikelet lemma 4.5–5 mm long, with cross-veins.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. Colombia. Brazil North.

Pariana parvispica R. W. Pohl. *Iowa State J. Res.*, 47(1): 73 (1972).

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 & G. Davidse 11646, 8 Jan 1969, Costa Rica: Limón: behind the Colegio at Siquirres, 70 m, 10.06N 83.30W (ISC; IT: CR-50766, US).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (396, Fig 144), E.J.Judziewicz et al, *American Bamboos* (1999) (296, Fig. 180).

Derivation (Clifford & Bostock 2007): *L. parvus*, small; *spica*, thorn. Inflorescence of small spikes or racemes.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms arching, 35–50 cm long, 1–2 mm diam. Culm-internodes thin-walled, distally with pubescent line. Culm-nodes pubescent. Lateral branches lacking. Leaves cauline, 6–13 per branch, distichous. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, 6–12 mm long, dark. Ligule a ciliolate membrane, 0.2–0.3 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long, petiole pubescent. Leaf-blades lanceolate, 9–13 cm long, 20–30 mm wide. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, linear, multilateral, 3 cm long. Rhachis fragile at the nodes, subterete, terminating in a sterile spikelet. Rhachis internodes linear, 9 mm long. Rhachis internode tip cupuliform. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a long tube, oblong, 9–10 mm long, base obconical. Pedicels present, fused to each other, united along margins, oblong, flattened, 8 mm long, glabrous, tip rectangular.

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, compressed slightly, 8 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 8 mm long, 1 length of upper glume, chartaceous, without keels, 1 -veined. Lower glume lateral veins absent. Lower

glume margins ciliolate. Lower glume apex obtuse. Upper glume oblong, 8 mm long, chartaceous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma oblong, 8 mm long, coriaceous, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, 2 -veined, without keels.

Flower and Fruit. Lodicules 3, 1–1.5 mm long, veined. Anthers 2. Stigmas 2, terminally exerted. Ovary glabrous.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 1.5 mm long, hairy. Male spikelet glumes 2. Male spikelet lemma 1.5 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Costa Rica.

Pariana radiciflora Sagot ex Doell. *Mart. Fl. Bras.* ii. II. 336. (1877).

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 & Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Sagot 701*, French Guiana: Cayenne (P; ILT: BM, K, US-2946999 (fragm.), US-1127070, US-2877977 (fragm.), US-2877978). LT designated (as type) by Tutin, J. Linn. Soc., Bot. 50(334): 352 (1936).

ST: *Lechler 2219a*, Peru: silvis uliginosis lecti

IT: *P.A. Sagot 711*, 1857, French Guiana: Karouany (U).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (211, Fig. 165).

Derivation (Clifford & Bostock 2007): L. radix, root; flos, flower. Culms dimorphic with the fertile arising separately from the rhizome.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Stolons absent or present. Culms erect, 20–100 cm long. Lateral branches lacking. Leaves cauline, 4–12 per branch. Leaf-sheaths glabrous on surface or pubescent. Leaf-sheath oral hairs setose, 8–12 mm long. Leaf-sheath auricles absent or erect, 0–5 mm long. Ligule an eciliate membrane, 0.7–3 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.4 cm long, petiole glabrous or pubescent. Leaf-blades lanceolate or oblong, 12–23 cm long, 25–60 mm wide, dark green or light green, discolorous with last colour beneath. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, oblong, multilateral, 6–11 cm long, 10–14 mm wide. Rhachis fragile at the nodes, subterete. Spikelet packing crowded. Rhachis internodes linear. Rhachis internode tip cupuliform. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong, 9–17 mm long, base obconical. Pedicels present, fused to each other, united along margins, cuneate, flattened, 2.5–4.2 mm long, glabrous to pubescent, tip rectangular.

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, compressed slightly, 5–7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 5–7 mm long, 1 length of upper glume, chartaceous, without keels. Lower glume apex acute. Upper glume ovate, 5–7 mm long, chartaceous, without keels. Upper glume margins ciliolate. Upper glume apex obtuse.

Florets. Fertile florets female. Fertile lemma ovate, 4–6 mm long, coriaceous, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, 2 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers (12–)18–24(–30). Stigmas 2, terminally exerted. Ovary glabrous.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 5.5–8.5 mm long. Male spikelet glumes 2. Male spikelet lemma 5.5–8.5 mm long, 2–3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Panama. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil North.

Pariana setosa Swallen. *Contrib. U. S. Nat. Herb.* xxix. 273 (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 Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Cuatrecasas 11323*, 27 Dec 1940, Colombia: Putumayo (US-1798754).

Illustrations (Journals): *Ruizia* (13:55, Fig. 6e (1993)).

Derivation (Clifford & Bostock 2007): L. seta, bristle; -osa, abundance. Glumes and/or lemmas awned or attenuated.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, 80–120 cm long. Leaves cauline. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2 mm long, brown. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.8 cm long. Leaf-blades lanceolate, 20–30 cm long, 30–58 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 15–20 cm long. Rhachis fragile at the nodes. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, tip rectangular.

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, laterally compressed, compressed slightly, 7–8 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 7–8 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume apex acute. Upper glume ovate, 7–8 mm long, 1.2–1.4 length of adjacent fertile lemma, chartaceous, 1-keeled. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5.5 mm long, coriaceous, without keel. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 6–8 mm long, hairy (glume margins). Male spikelet glumes 2, linear, 6–8 mm long. Male spikelet lemma 6–8 mm long, with cross-veins.

Distribution (TDWG). Continent. South America.

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

Pariana simulans Tutin. *Journ. Linn. Soc. Lond., Bot.* 1. 357 (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 Panama. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H. Pittier 4075*, Aug 1911, Panama: Colón (US-679171; IT: US-1021389).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. simulo, resemble. Resembling another species, usually in the same genus.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60 cm long. Leaves cauline. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades oblong, 8–12 cm long, 20–25 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 3.5–4.5 cm long, 8–10 mm wide. Rhachis fragile at the nodes, terminating in a sterile spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3 mm long, pubescent or ciliate, hairy on surface or margins, tip rectangular.

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, laterally compressed, compressed slightly, 6 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume apex acuminate. Upper glume lanceolate, 6 mm long, 1.2 length of adjacent fertile lemma, chartaceous, 1-keeled. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface puberulous. Lemma apex obtuse. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3, oblong, 0.25 mm long, ciliate. Anthers 20. Filaments united in groups. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4 mm long, hairy. Male spikelet glumes 2, triangular, 2–3 mm long, awned (0.5mm). Male spikelet lemma 4 mm long, 3 -veined, with cross-veins.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, Brazil. Panama. Venezuela. Colombia, Ecuador, Peru. Brazil North.

Pariana sociata Swallen. *Journ. Wash. Acad. Sc.* . 76. (1940).

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: *J.R. Swallen 3599*, 18 Feb 1934–26 Feb 1934, Brazil: Maranhão (US-1613672).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms geniculately ascending, 40–60 cm long. Leaves cauline. Leaf-sheaths keeled. Leaf-sheath oral hairs setose. Ligule an eciliate membrane, 0.5 mm long, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1 cm long, petiole pubescent. Leaf-blades elliptic, 8.5–12 cm long, 17–35 mm wide. Leaf-blade surface scaberulous, rough adaxially, puberulous, hairy abaxially. Leaf-blade margins serrulate. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 7–8 cm long, 10–13 mm wide. Rhachis fragile at the nodes. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 4 mm long, pubescent, tip rectangular.

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, laterally compressed, compressed slightly, 6 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 6 mm long, 1 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 6 mm long, 1.2 length of adjacent fertile lemma, chartaceous, 1-keeled, 3 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, coriaceous, without keel. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3. Anthers 2 mm long. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 5 mm long, hairy. Male spikelet glumes 2, 2–3 mm long. Male spikelet lemma 5 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Brazil North.

Pariana stenolemma Tutin. *J. Linn. Soc., Bot.* 50(334): 350, f. 14 (1936).

Regarded by K as a synonym (*P. ulei*).

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 Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. Klug 956*, Feb-Mar 1930, Peru: Loreto (US-1455941, IT: NY-277636).

Illustrations (Journals): *Ruizia* (13:55, Fig 6a-c (1993) as *P. stenophylla*).

Derivation (Clifford & Bostock 2007): Gk *stenos*, arrow; *lemma*, scale. Lemmas narrow-lanceolate.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 100–200 cm long. Leaves cauline. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2–0.4 cm long, petiole glabrous or pubescent. Leaf-blades lanceolate or elliptic, 14–25 cm long, 25–55 mm wide. Leaf-blade surface pubescent, hairy adaxially (on midrib). Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 8–10 cm long, 10 mm wide. Rhachis fragile at the nodes, terminating in a spikelet or sterile spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3–3.5 mm long, pubescent, hairy at base, tip rectangular.

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, laterally compressed, compressed slightly, 8 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 8 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume apex acute. Upper glume ovate, 8 mm long, 1.2–1.3 length of adjacent fertile lemma, chartaceous, 1-keeled. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 6–7 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3, oblong, 0.25–0.5 mm long. Anthers 15. Filaments free. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 6–7 mm long. Male spikelet glumes 2, linear, 5–6 mm long. Male spikelet lemma 6–7 mm long, 1 -veined, without cross-veins.

Distribution (TDWG). Continent. South America.

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

Pariana strigosa Swallen. *Ann. Missouri Bot. Gard.* . 257 (1943).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: C.W. Dodge & P.H. Allen 17301, 5 Jan 1935, Panama: Panamá, Río Indio, forest along small unnamed quebrada entering lake at 70 m level, elev. 70–80 m (US-1647098; IT: GH, MO-1090784).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. covered with short, bristle-like hairs. One or more organs covered with bristle-like hairs.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–65 cm long. Culm-internodes distally glabrous or pubescent. Leaves cauline, 2–3 per branch. Leaf-sheaths longer than adjacent culm internode, pubescent. Leaf-sheath oral hairs lacking. Leaf-sheath auricles erect. Ligule an eciliate membrane, 2 mm long, pubescent on abaxial surface, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3–0.5 cm long, petiole glabrous. Leaf-blades lanceolate or ovate, 12–15 cm long, 45–53 mm wide, grey-green or glaucous, discolourous with last colour beneath. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 7 cm long, bearing 11–12 fertile spikelets on each. Rhachis fragile at the nodes, terminating in a sterile spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 2.5–3.5 mm long, villous, hairy below, tip rectangular.

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, laterally compressed, compressed slightly, 6–6.7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–6.7 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface pubescent. Lower glume apex acute. Upper glume lanceolate, 6–6.7 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface pubescent. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 4.8–5 mm long, coriaceous, without keel. Palea without keels.

Flower and Fruit. Lodicules 3, oblong. Anthers 18, 1.8 mm long. Stigmas 2. Caryopsis with adherent pericarp, ovoid, 5 mm long, acute.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 5–6 mm long. Male spikelet glumes 2, triangular, 4–5 mm long, muticous. Male spikelet lemma 5–6 mm long, 3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Panama.

Pariana swallenii R. C. Foster. *Rhodora*, lxxviii. 239 (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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Cárdenas & Cutler 7538*, Oct., Bolivia: Cochabamba 395 m (GH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Jason Richard Swallen (1903–1991) United States botanist.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 56–68 cm long. Leaves cauline. Leaf-sheaths glabrous on surface or puberulous. Leaf-sheath oral hairs setose, 5–15 mm long. Ligule an eciliate membrane, 5 mm long. Leaf-blade base cuneate, with a brief petiole-like connection to sheath. Leaf-blades ovate, 18–29 cm long, 55–65 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 14.5 cm long. Rhachis fragile at the nodes, terminating in a spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets (male), with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 1–4.8 mm long, ciliate, hairy at base, tip rectangular.

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, laterally compressed, compressed slightly, 7.3–9.3 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 7.3–9.3 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume apex acute. Upper glume ovate, 7.3–9.3 mm long, chartaceous, 1-keeled. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 6.5–7.5 mm long, coriaceous, without keel. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4.5–8.5 mm long, acute. Male spikelet glumes 2, triangular, 1.8–4.8 mm long, muticous. Male spikelet lemma 4.5–8.5 mm long, muticous.

Distribution (TDWG). Continent. South America.

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

Pariana tenuis Tutin. *Journ. Linn. Soc. Lond., Bot.* 1. 348 (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 Colombia or Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Colombia or Brazil: in fluviis Uaupes inundatis, *Spruce 2919* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. thin. Culms, leaf-blades or pedicels, slender.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25–30 cm long. Leaves cauline. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1 cm long, petiole glabrous. Leaf-blades lanceolate, 7–12 cm long, 30–50 mm wide. Leaf-blade surface smooth or scaberulous, rough abaxially. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 3.5 cm long, 5–6 mm wide. Rhachis fragile at the nodes, terminating in a sterile spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3 mm long, pubescent, tip rectangular.

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, laterally compressed, compressed slightly, 4 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 4 mm long, 1 length of adjacent fertile lemma, chartaceous, 1-keeled. Upper glume margins ciliate. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 4 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute, pubescent. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3. Anthers 6. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 3 mm long, hairy. Male spikelet glumes 2, linear, 2.5–3 mm long. Male spikelet lemma 3 mm long, 1 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Western South America, Brazil. Panama. Colombia, Peru. Brazil North.

Amazonas, Acre, Rondonia.

Pariana trichosticha Tutin. *Journ. Linn. Soc. Lond., Bot.* 1. 356 (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 Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. Klug* 209, Oct 1929–Nov 1929, Peru: Loreto (US-1455210, IT: NY-277637).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk *thrix*, hair; *stichos*, row. Leaf-blades conspicuously hairy along their veins.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 50–60 cm long. Culm-internodes distally glabrous or pubescent. Leaves cauline. Leaf-sheaths pubescent. Leaf-sheath oral hairs setose. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.5–0.7 cm long, petiole pubescent. Leaf-blades lanceolate, 13–25 cm long, 40–60 mm wide. Leaf-blade surface pubescent, hairy adaxially (on midrib). Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 6 cm long, 7–9 mm wide. Rhachis fragile at the nodes, terminating in a sterile spikelet. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3–4 mm long, pubescent, hairy at base, tip rectangular.

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, laterally compressed, compressed slightly, 7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7 mm long, 1 length of upper glume, chartaceous, 1-keeled. Lower glume surface pubescent. Lower glume apex

acuminate. Upper glume lanceolate, 7 mm long, 1.4 length of adjacent fertile lemma, chartaceous, 1-keeled. Upper glume surface pubescent. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4.5–5 mm long, glabrous or hairy. Male spikelet glumes 2, triangular, 1.5 mm long. Male spikelet lemma 4.5–5 mm long, 3 -veined, without cross-veins.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Western South America, Brazil. Panama. Colombia, Peru. Brazil North.

Pariana ulei Pilger. *Notizbl. Bot. Gart. Berlin* vi. 112 (1914).

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: *E. Ule* 5307, Oct 1900, Brazil: Amazonas: Rio Jurua (B; IT: K(fragm., US-2877974)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Ernst Heinrich Georg Ule (1854–1915) German botanist sometime resident in Brazil.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms erect, 30–50 cm long. Leaves cauline. Leaf-sheath oral hairs lacking or ciliate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 13–16 cm long, 37–40 mm wide. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 5–7 cm long. Rhachis fragile at the nodes. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 6 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 3 mm long, pubescent, hairy at base, tip rectangular, winged.

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, laterally compressed, compressed slightly, 7–8 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–8 mm long, 1 length of upper glume, chartaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface puberulous. Lower glume apex acute. Upper glume lanceolate, 7–8 mm long, 1.5 length of adjacent fertile lemma, chartaceous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface puberulous. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3, orbicular, 1 mm long. Anthers 20. Filaments united in a tube. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 6–7 mm long. Male spikelet glumes 2, lanceolate or ovate (unequal), 3.5–4 mm long. Male spikelet lemma 6–7 mm long.

Distribution (TDWG). Continent. South America.

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

Pariana velutina Swallen. *Journ. Wash. Acad. Sc.* . 78. (1940).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.M. Schunke* 164, 4 Feb 1935, Peru: Loreto (US-1458908; IT: US-2209350; IT: F).

Illustrations (Journals): *Ruizia* (Gr Peru 13: 56 (1993)).

Derivation (Clifford & Bostock 2007): *L. velvety*. Plant in whole or in part covered with dense short hairs.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, 45–50 cm long. Culm-internodes distally pubescent. Leaves cauline. Leaf-sheaths longer than adjacent culm internode, keeled, pubescent. Leaf-sheath oral hairs setose. Leaf-sheath auricles erect. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate or ovate, 12–16 cm long, 20–46 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, multilateral, 5–6 cm long. Rhachis fragile at the nodes. Rhachis internodes linear. Sexes mixed (in a cluster at each node). Spikelets subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong. Pedicels present, fused to each other, united along margins, oblong, flattened, 2–2.5 mm long, villous, hairy at base, tip rectangular.

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, laterally compressed, compressed slightly, 5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 5 mm long, 1 length of upper glume, chartaceous, 1-keeled, 1–3 -veined. Lower glume surface pubescent. Lower glume apex obtuse or acute. Upper glume ovate, 5 mm long, 1 length of adjacent fertile lemma, chartaceous, 1-keeled, 1–3 -veined. Upper glume surface pubescent. Upper glume apex obtuse or acute.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, coriaceous, without keel. Lemma surface pubescent, hairy above. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Lodicules 3. Anthers 2.5 mm long. Stigmas 2.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 4.5 mm long, hairy. Male spikelet glumes 2, triangular, 2–2.5 mm long. Male spikelet lemma 4.5 mm long, 3 -veined.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Peru. Brazil North.

Pariana violascens Swallen. *Mem. New York Bot. Gard.* 9(3): 267 (1957).

Regarded by K as a synonym (*P. simulans*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Venezuela. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *B. Maguire & L. Politi 27327*, 19 Nov 1948, Venezuela: Amazonas: Río Cuaó (US-2040165).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. violasco*, become violet. Anthers, stigmas or glumes blue to purple.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Distribution (TDWG). Continent. South America.

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

Pariana vulgaris Tutin. *Journ. Linn. Soc. Lond., Bot.* 1. 353 (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 Guyana. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *T.G. Tutin 38*, 6 May 1933 or 5 Jun 1933, Guyana: Cuyuni River (BM; IT: US-1760644).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. vulgus*, public; -are, pertaining to. Common in the wild or in cultivation.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms erect, 40–60 cm long. Lateral branches lacking. Leaves cauline, 4–8 per branch. Leaf-sheaths mostly shorter than adjacent culm internode, puberulous. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3–0.4 cm long, petiole pubescent. Leaf-blades lanceolate or oblong, 10–18 cm long, 30–45 mm wide. Leaf-blade surface smooth. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence composed of racemes. Racemes 1, single, erect, oblong, multilateral, 5–6 cm long. Rhachis fragile at the nodes, subterete. Spikelet packing crowded. Rhachis internodes linear. Rhachis internode tip cupuliform. Sexes mixed (in a cluster at each node). Spikelets appressed, subtended by an involucre. Fertile spikelets sessile, 1 in the cluster. Male spikelets pedicelled, 5 in a cluster. Involucre composed of imperfect spikelets, with pedicels forming a cup, oblong, 8–9 mm long, base obconical. Pedicels present, fused to each other, united along margins, cuneate, flattened, 2 mm long, glabrous, tip rectangular.

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, compressed slightly, 9 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 9 mm long, 1 length of upper glume, chartaceous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 8 mm long, chartaceous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume margins ciliate. Upper glume apex setaceous acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 6–6.5 mm long, coriaceous, without keel. Lemma apex acute. Palea 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Lodicules 3, 1.8 mm long. Anthers 20. Stigmas 2, terminally exerted. Caryopsis 3.5 mm long.

Male spikelets distinct from female, 1 flowered, deciduous with the fertile, ovate, 6–7 mm long. Male spikelet glumes 2, 5–6 mm long. Male spikelet lemma 6–7 mm long, 1 -veined.

Distribution (TDWG). Continent. South America.

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

Para, Amapa.

Pariana zingiberina Rich. ex Döll. *Fl. Bras.* 2(2): 337 (1877).

Regarded by K as a synonym (*P. radiceiflora*).

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 & French Guiana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Martius s.n.*, Brazil: Pará: habitat in sylvis ad Cunumá (M). ST: *L. C. Richard s.n.*, French Guiana: in uliginosis umbrosis silvaticis Guianae gallica ST: *Yelski s.n.*, French Guiana.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ina, belonging to. Leaf-blades broad like those of *Zingiber*.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. French Guiana, Guyana, Venezuela. Bolivia, Peru. Brazil North.

Para, Amapa.

Parodiolyra colombiensis G. Davidse & F. Zuloaga. *Novon*, 9(4): 587 (1999).

Accepted by: 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: Caquetá: Región de Araracuara: alrededores de la pista aérea, 00.25'S, 72.30'W, 200–300 m, 11 Nov 1991, hierba, raquillas de la infrutescencia moradas, frutos verdes, *D. Restrepo* & *A. Matapi* 467 (HT: COAH-017796; IT: COAH-020068, MO-5102566).

Illustrations (Journals): *Novon* (9: 588 Fig.1 (1999)).

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

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culm-internodes terete, thin-walled, 3–7 cm long, distally glabrous. Culm-nodes brown, glabrous or pubescent. Leaves cauline. Leaf-sheaths striately veined, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles erect, 2–4 mm long. Ligule a ciliate membrane. Leaf-blade base truncate, asymmetrical, with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades lanceolate or ovate, 8–14.5 cm long, 17–30 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous, glabrous or ciliate, hairy at base. Leaf-blade apex attenuate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 6–10 cm long. Primary panicle branches ascending, 1–6 -nate. Panicle axis scaberulous. Sexes segregated, on bisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, 1.5–7 mm long, 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 elliptic, dorsally compressed, 4–5 mm long, 1.3 mm wide, falling entire. Rhachilla internodes elongated between glumes and elongated below proximal fertile floret. Rhachilla elongation 0.6 mm long.

Glumes. Glumes similar, subequal in width, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 4–5 mm long, 0.9 length of upper glume, membranous, without keels, 3 -veined. Lower glume lateral veins with cross-veins. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume elliptic, 4.2–4.6 mm long, membranous, without keels, 5 -veined. Upper glume lateral veins with cross-veins. Upper glume surface scabrous. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma elliptic, dorsally compressed, 3.4 mm long, 1.4 mm wide, indurate, without keel, 5 -veined, more than 3-veined. Lemma surface punctate. Palea indurate, without keels.

Flower and Fruit. Lodicules 3, 0.4 mm long, truncate. Anthers 3, 2.3–3 mm long. Stigmas 2.

Male spikelets distinct from female, 1 flowered, lanceolate, 4 mm long. Male spikelet glumes 2, ovate, 0.05 mm long. Male spikelet lemma 4 mm long, 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

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

Parodiolyra lateralis (Presl ex Nees von Esenbeck) T.R. Soderstrom & F.O. Zuloaga. *Smithsonian Contrib. Bot.*, 69: 66 (1989).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Peru. **Basionym or Replaced Name:** *Panicum laterale* J. Presl ex Nees, *Fl. Bras. Enum. Pl.* 2(1): 213–214 (1829)

. T:<Type of Basionym>; *fide* TROPICOS and Kew Synonymy Database: HT: *T. Haenke s.n.*, no date, Peru (PR (fragm., US-979110; photo, US)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (47, Fig. 9), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (213, Fig. 167), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (449, Fig. 80).

Illustrations (Journals): *Smithsonian Contributions to Botany* (69 , 67 (1989)), *Ruizia* (13:40, Fig.3f-h (1993)).

Derivation (Clifford & Bostock 2007): laterus, side; -ale, pertaining to. Inflorescence forming as a lateral shoot.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial. Culms scandent, 800 cm long, rooting from lower nodes. Culm-internodes thin-walled, distally glabrous. Culm-nodes swollen, pubescent to bearded. Leaves cauline. Leaf-sheaths pilose, with simple hairs or reflexed hairs, outer margin glabrous or hairy. Leaf-sheath auricles erect. Ligule a ciliate membrane, 0.2 mm long. Leaf-blade base broadly rounded to cordate, with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long. Leaf-blades lanceolate to ovate, 2.5–5 cm long, 0.5–1.3 mm wide. Leaf-blade venation parallel. Leaf-blade surface glabrous to pubescent. Leaf-blade margins ciliate. Leaf-blade apex acuminate (abruptly). Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence a panicle. Peduncle glabrous. Panicle open, pyramidal. Primary panicle branches spreading, 1.2–3 cm long. Panicle branches straight to flexuous, glabrous to pilose. Sexes segregated, on bisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, filiform, glabrous to pubescent, tip rectangular.

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, 2–2.6 mm long, 1.2 mm wide, falling entire. Rhachilla internodes elongated between glumes or elongated below proximal fertile floret.

Glumes. Glumes similar, subequal in width, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume lateral veins without connecting veins or with cross-veins. Lower glume surface glabrous to pilose. Upper glume elliptic, membranous, without keels, 3–5 -veined. Upper glume lateral veins without cross-veins or with cross-veins. Upper glume surface glabrous to hispid.

Florets. Fertile florets female. Fertile lemma ovate or obovate, dorsally compressed, indurate, pallid, shiny, without keel, 7 -veined, more than 3-veined. Lemma apex obtuse. Palea obovate, indurate, 2 -veined, without keels. Palea surface smooth.

Flower and Fruit. Lodicules 3. Anthers 3, 2 mm long, purple. Stigmas 2. Caryopsis ellipsoid, light brown. Hilum linear, 0.5–0.75 length of caryopsis.

Male spikelets distinct from female, 1 flowered, lanceolate, glabrous to hairy. Male spikelet glumes absent. Male spikelet lemma muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, Brazil. Costa Rica, Panama. Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil North.

Parodiolyra luetzelburgii (Pilger) T.R. Soderstrom & F.O. Zuloaga. *Smithsonian Contrib. Bot.*, 69: 70 (1989).

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 luetzelburgii* Pilg., *Notizbl. Bot. Gart. Berlin-Dahlem* 10(100): 1049 (1930). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *P. von Luetzelburg 21354*, Oct 1927, Brazil: Roraima (B (fragm., US-2877941); IT: IAN, R).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (213, Fig. 166), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (449, Fig 80).

Illustrations (Journals): *Smithsonian Contributions to Botany* (69 : 69 (1989)).

Derivation (Clifford & Bostock 2007): in honor of Philipp Luetzelberg (1880–1948) German botanist.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms geniculately ascending or scandent, 70–160 cm long. Culm-internodes thin-walled, distally glabrous. Culm-nodes swollen, black, glabrous. Leaves cauline. Leaf-sheaths pilose. Ligule a ciliolate membrane, 0.4 mm long. Leaf-blade base broadly rounded, asymmetrical, with a brief petiole-like connection to sheath, petiole 0.2 cm long, petiole pilose. Leaf-blades lanceolate or ovate, 8–11 cm long, 16–31 mm wide, stiff, glaucous. Leaf-blade surface scabrous, glabrous or pubescent, hairy abaxially. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex obtuse. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, pyramidal, 5–8 cm long, 4.5–8 cm wide. Primary panicle branches whorled at lower nodes. Panicle branches scaberulous, pubescent in axils. Sexes segregated, on unisexual branches or bisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled, 2–3 in a cluster. Pedicels present, (female) filiform, smooth, pubescent, tip rectangular.

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, 3–3.6 mm long, 1.5–1.7 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated between glumes or elongated below proximal fertile floret.

Glumes. Glumes similar, subequal in width, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 3–3.6 mm long, 1 length of upper glume, chartaceous, without keels, 7–9 -veined. Lower glume surface scabrous, glabrous or pubescent, hairy at apex. Lower glume apex acute. Upper glume ovate, 3–3.6 mm long, chartaceous, without keels, 5–7 -veined. Upper glume surface scabrous, glabrous or pubescent, hairy above. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma lanceolate, dorsally compressed, 1.9–2.5 mm long, 1–1.2 mm wide, indurate, pallid, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface smooth, glabrous. Lemma apex acute, papillose. Palea obovate, indurate, 2 -veined, without keels. Palea surface smooth. Palea apex excavated.

Flower and Fruit. Lodicules 3. Anthers 3, 3.2 mm long. Stigmas 2. Ovary glabrous. Caryopsis orbicular, 1.4 mm long, light brown. Hilum linear, 0.5–0.75 length of caryopsis.

Male spikelets distinct from female, 1 flowered, lanceolate, 4.2–5.1 mm long, glabrous to hairy. Male spikelet glumes absent. Male spikelet lemma 3–4 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. French Guiana, Guyana, Surinam, Venezuela. Colombia. Brazil West Central, Brazil Northeast, Brazil North.

Parodiolyra micrantha (Kunth) Davidse & Zuloaga. *Novon* 9(4): 590 (1999).

Accepted by: U. Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Venezuela. **Basionym or Replaced Name:** *Olyra micrantha* Kunth, *Nov. Gen. Sp. (quarto ed.)* 1: 199 (1815) [1816].

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Humboldt & Bonpland s.n.*, Apr, Venezuela: Crescit in umbrosis humidis ad ripam Orinoci prope cataractam Maypurensium (P; IT: US-2877940 (fragm. ex P)).

Illustrations (Books): S.A. Renvoize, *Gramineas de Bolivia* (1998) (50, Fig 6 as *Olyra*), S.A. Renvoize, *The Grasses of Bahia*, 1984 (25, Fig. 6 as *Olyra*), J.A. Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (171, Fig. 124 as *Olyra*), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (174, Fig. 35 as *Olyra*), E.J. Judziewicz et al, *American Bamboos* (1999) (293, Fig. 178 as *Olyra*), E.J. Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (350, Fig. 64 as *Olyra*).

Illustrations (Journals): *Smithsonian Contributions to Botany* (69: 47 (1989) as *Olyra*), *Ruizia* (13:40, Fig. 3i (1993) as *Olyra*).

Images: *Smith. Contrib. Bot.* No. 69 : 36 (1989) as *Olyra*.

Derivation (Clifford & Bostock 2007): Gk. mikros, small; anthos, flower. Spikelets small.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms scandent or erect, 100–400 cm long, woody, without nodal roots. Culm-internodes terete, thin-walled, distally glabrous. Culm-nodes glabrous to pubescent. Lateral branches sparse. Leaves cauline. Leaf-sheaths narrower than blade at the collar, pubescent. Ligule a ciliolate membrane, 2.4–15 mm long, pubescent on abaxial surface, obtuse to acute. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades lanceolate to oblong, 13–32(–55) cm long, 2.4–12(–13) mm wide, discolorous with last colour beneath. Leaf-blade venation parallel, with distinct cross veins. Leaf-blade apex acuminate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence a panicle. Peduncle hispid above. Panicle open, pyramidal, 10–32 cm long, 4–14 cm wide. Primary panicle branches bearing spikelets almost to the base. Panicle branches smooth, hispid. Sexes segregated, on bisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled. Pedicels present, linear, terete, glabrous or 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 ovate, dorsally compressed, 5.4–12.8 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, subequal in width, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 1.1 length of upper glume, herbaceous, without keels, 5 -veined. Lower glume primary vein eciliate or ciliate. Lower glume lateral veins without connecting veins or with cross-veins (seldom). Lower glume surface glabrous to pilose. Lower glume apex caudate, awned, 1 -awned, awn 0.5–2.5 mm long. Upper glume ovate, 1.2 length of adjacent fertile lemma, herbaceous, without keels, 3–5 -veined. Upper glume primary vein eciliate or ciliolate (seldom). Upper glume lateral veins without cross-veins or with cross-veins (10 X lens). Upper glume surface glabrous to hispid. Upper glume apex caudate, mucous or awned, 1 -awned, awn 0–1 mm long.

Florets. Fertile florets female. Fertile lemma ovate, dorsally compressed, 2.8–3.5 mm long, indurate, pallid or dark brown, dull, without keel, more than 3-veined. Lemma lateral veins obscure. Lemma surface pitted. Lemma margins involute. Lemma apex acute. Palea ovate, involute, 0.9 length of lemma, indurate, without keels. Palea surface scabrous. Palea apex obtuse.

Flower and Fruit. Lodicules 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, dark brown. Embryo 0.2 length of caryopsis. Hilum linear, 1 length of caryopsis.

Male spikelets distinct from female, 1 flowered, 7.4–9.3 mm long. Male spikelet glumes absent. Male spikelet lemma 7–9 -veined, awned.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil, Southern South America. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay.

TDWG4. Roraima, Para, Amapa, Bahia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Misiones.

Parodiolyra ramosissima (Trinius) T.R. Soderstrom & F.O. Zuloaga. *Smithsonian Contrib. Bot.*, 69: 73 (1989).

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 ramosissima* Trin., *Mem. Acad. Imp. Sci. Saint-Petersbourg, Ser. 6, Sci. Math., Seconde Pt. Sci. Nat.* 3,1(2–3): 116 (1834). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Riedel 161*, 1831, Brazil: Esperanca: Bahia (LE-TRIN-1131.01; IT: GH, K, LE-TRIN-1131.02, US (fragm. ex LE-TRIN)).

Recent Synonyms: *Olyra ramosissima* Trin., *Mem. Acad. Petersb. Ser. 6* 3. 2. 116. (1834).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (25, Fig.6 as *Olyra*), E.J.Judziewicz et al, *American Bamboos* (1999) (301, Fig. 183).

Illustrations (Journals): *Smithsonian Contributions to Botany* (69 : 74 (1989)).

Derivation (Clifford & Bostock 2007): L. ramus, branch; -osa, abundance; -issima, most. Inflorescence an open, much branched panicle.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending or scandent, slender, 20–150 cm long, woody, without nodal roots. Culm-internodes thin-walled, distally glabrous. Culm-nodes swollen, glabrous. Lateral branches ample, arising from upper culm. Leaves cauline. Leaf-sheaths ribbed, glabrous on surface or pilose, with reflexed hairs, outer margin hairy. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blade base broadly rounded, asymmetrical, with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long, petiole glabrous or pubescent. Leaf-blades lanceolate or ovate, 3.6–13 cm long, 9–20 mm wide, stiff. Leaf-blade surface smooth or scabrous, rough abaxially, glabrous or pilose, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex abruptly acute or acute, apiculate. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Inflorescence a panicle, terminal and axillary, with 2–3 peduncles per sheath. Panicle open or contracted, linear or oblong, 3–8 cm long, 1–4 cm wide. Panicle branches pubescent in axils. Sexes segregated, on unisexual branches or bisexual branches, with male below. Spikelets solitary. Fertile spikelets pedicelled. Male spikelets pedicelled, 2 in a cluster. Pedicels present, (female) filiform or cuneate, tip rectangular.

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, (4–)5–5.8 mm long, 1.9–2.8 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated between glumes or elongated below proximal fertile floret. Rhachilla elongation 0.3 mm long (below floret).

Glumes. Glumes similar, subequal in width, exceeding apex of florets, thinner than fertile lemma. Lower glume elliptic or ovate, 4–5.1 mm long, 1.1 length of upper glume, chartaceous or herbaceous, without keels, 7–9 -veined. Lower glume lateral veins with cross-veins. Lower glume surface scabrous, glabrous or puberulous. Lower glume apex obtuse or acute. Upper glume elliptic or ovate, 3.9–5 mm long, chartaceous or herbaceous, without keels, 5–9 -veined. Upper glume lateral veins with cross-veins. Upper glume surface scabrous, glabrous or puberulous. Upper glume apex obtuse or acute.

Florets. Fertile florets female. Fertile lemma elliptic, dorsally compressed, 3–3.5 mm long, indurate, pallid or dark green or light brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface smooth, with distinct germination flap, glabrous. Lemma margins involute. Lemma apex obtuse or acute, with a shallow excavation or papillose. Palea elliptic or obovate, involute, 1 length of lemma, indurate, 2 -veined, without keels. Palea surface smooth. Palea apex obtuse, excavated.

Flower and Fruit. Lodicules 3. Anthers 3. Stigmas 2. Ovary with a few apical hairs. Caryopsis with adherent pericarp, ellipsoid, 2–2.5 mm long, light brown. Hilum linear, 0.75 length of caryopsis.

Male spikelets distinct from female, 1 flowered, lanceolate, 3–4.3 mm long, glabrous to hairy. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4. Bahia.

Parodiophyllochloa cordovensis (Fourn.) Zuloaga & Morrone. *Systematic Botany* 33: 69 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*).

TYPE from Mexico. **Basionym or Replaced Name:** *Panicum cordovense* Fourn., *Mex. Pl. Enum., Gram.* 2: 26 (1886). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.G. Schaffner 293*, Mexico: Veracruz: Córdoba (P; IT: BAA (fragm.), US-80578 (fragm. ex P)).

Recent Synonyms: *Panicum dusenii* Hack. *Fedde, Repert. Nov. Sp.* 8: 513 (1910).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004).

Illustrations (Journals): *Systematic Botany* (33: 71, Fig. 2 (2008)).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe MICROCALAMINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 25 cm long, rooting from lower nodes. Culm-internodes distally glabrous. Lateral branches ample. Leaves cauline. Leaf-sheaths mostly shorter than adjacent culm internode, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliate membrane. Leaf-blade base broadly rounded. Leaf-blades spreading, lanceolate, 5–7 cm long, 10–12 mm wide, stiff. Leaf-blade midrib evident. Leaf-blade venation distinct. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, obovate, 6–12 cm long, 3–7 cm wide, contracted about secondary branches. Primary panicle branches spreading, 1–2 -nate. Panicle branches scaberulous. Spikelets solitary or in pairs. 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, dorsally compressed, plano-convex, acute, 3–5 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface puberulous. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, puberulous, acute. Fertile lemma lanceolate, dorsally compressed, 3–5 mm long, indurate, without keel, more than 3-veined. Lemma margins involute. Lemma apex mucronate. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.3–0.4 mm long. Caryopsis with adherent pericarp.

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

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

TDWG4. Mato Grosso, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Jujuy, Tucuman. Corrientes, Misiones. Puebla. Hidalgo. Veracruz. Chiapas.

Parodiophyllochloa missiona (Ekman) Zuloaga & Morrone. *Systematic Botany* 33: 70 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*).

TYPE from Argentina. **Basionym or Replaced Name:** *Panicum missionum* Ekman, *Arkiv Bot. Stockh.* xi. No. 4, 19 (1912). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman 632*, 26 Dec 1907, Argentina: Misiones: Bonpland, ad rivulum (S; IT: CORD, US-80783 (fragm. ex S), US-602561).

Recent Synonyms: *Panicum unilineatum* Mez, *Engl. Jahrb.* 56, *Beibl.* 125, 1 (1921).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (313, Fig. 126 as *P. unilineatum*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (as *P. unilineatum*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (260, Fig. 73 as *Panicum missionum*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (339, Fig. 144).

Derivation (Clifford & Bostock 2007): L. from Misiones State, Argentina.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe MICROCALAMINAE.

Habit, Vegetative Morphology. Perennial. Culms rambling, 30–120 cm long. Culm-internodes 2–12 cm long. Culm-nodes glabrous or pubescent. Lateral branches ample, arising from lower culm. Leaf-sheaths 1.5–5 cm long, mostly shorter than adjacent culm internode, pilose, with tubercle-based hairs. Leaf-sheath oral hairs lacking. Ligule a ciliate membrane. Leaf-blade base symmetrical, with a false petiole. Leaf-blades linear or lanceolate, 4–12 cm long, 5–11 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade margins scabrous, ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences different from terminal (cleistogamous), compact or enclosed. Panicle open, ovate, 17–24 cm long, 12–18 cm wide. Primary panicle branches spreading. Panicle axis scabrous, with scattered hairs or pubescent. Panicle branches scabrous, glabrous or pubescent, pubescent in axils. Spikelets in pairs. 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, dorsally compressed, 2.4–3.1 mm long, 1–1.5 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.6–2.8 mm long, 0.75–0.8 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2–2.6 mm long, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Mato Grosso, Sao Paulo Parana. Buenos Aires, Corrientes, Entre Rios, Misiones.

Parodiophyllochloa ovulifera (Trin.)Zuloaga & Morrone. *Systematic Botany* 33: 73 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum ovuliferum* Trin., *Gram. Panic.* 191 (1826). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *L. Riedel s.n.*, no date, Brazil: Rio de Janeiro (US-80893 (ex LE)). HT: *G.H. von Langsdorff s.n.*, Brazil (LE(fragm. BAA, US); IT: NY, P).

Recent Synonyms: *Panicum cordovense* Fourn., *Mex. Pl. Enum.*, *Gram.* 26 (1886).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (734, Fig. 154 as *Panicum ovuliferum* var. *ovuliferum*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (266, Fig. 75), B.Rosengurt, *Gramineas Uruguayas I* (1970) (339, Fig. 144 as *Panicum*).

Derivation (Clifford & Bostock 2007): *L. ovulum*, small egg; fero, bear. Anthoecia egg-shaped.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe MICROCALAMINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 40–120 cm long, 1–2 mm diam., rooting from lower nodes. Culm-internodes distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 0.2–0.4 mm long, erose. Leaf-blade base cordate, asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 5.5–12 cm long, 8–12 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences different from terminal (spikelets cleistogamous, pubescent). Panicle open, pyramidal, 13–30 cm long, 13–26 cm wide. Primary panicle branches 1–2 -nate. Panicle branches bearded in axils. Spikelets appressed, solitary or in pairs. 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, 3.1–3.6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2.2–2.6 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume lateral veins prominent. Lower glume apex obtuse. Upper glume ovate, 2.9–3.2 mm long, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume lateral veins prominent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 2.4–3.1 mm long, 1 length of spikelet, membranous, 7 -veined, prominently veined, acute. Fertile lemma obovate, dorsally compressed, 2.4–3.1 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.1–1.7 mm long, orange.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mato Grosso, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Jujuy, Salta, Tucuman. Corrientes, Misiones.

Parodiophyllochloa pantricha Hack. *Verh. Zool.-Bot. Ges. Wien*, lxxv. 72. (1915).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum pantrichum* Hack., *Verh. Zool.-Bot. Ges. Wien*, 65: 72 (1915). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Jurgens G-196*, Feb 1909, Brazil: Rio Grande do Sul: Mun. Rio Pardo, Fazenda Leitão, 70 m (W; IT: BAA (fragm.), US-80943 (fragm. ex W)).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (171, Fig. 63 as *Panicum pantrichum*), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (734, Fig 154 as *Panicum pantrichum*), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (377, Fig. 138 as *Panicum pantrichum*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (269, Fig. 76 as *Panicum pantrichum*).

Derivation (Clifford & Bostock 2007): Gk. pas, all, whole; thrix, hair. Plant softly papillose.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe MICROCALAMINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Culms rambling, 6–25 cm long, 1 mm diam., rooting from lower nodes. Culm-internodes distally pubescent. Lateral branches lacking. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.2–0.3 mm long. Leaf-blade base asymmetrical. Leaf-blades ovate, 3.5–8 cm long, 7–10 mm wide. Leaf-blade surface pubescent.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences present in upper axils, enclosed. Panicle open, pyramidal, 2–10 cm long, 1–8 cm wide, bearing few spikelets, contracted about primary branches. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, 2.2–2.8 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.6–2.3 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface pubescent. Lower glume apex obtuse. Upper glume ovate, 2.2–2.7 mm long, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 2–2.5 mm long, 1 length of spikelet, membranous, 5–6 -veined, without midvein or with obscure midvein, pubescent, acute. Fertile lemma elliptic or obovate, dorsally compressed, 1.9–2.2 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.3 mm long, retained within floret, pallid. Caryopsis ellipsoid, 0.9–1.4 mm long, light brown or red.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, Brazil, Southern South America. Costa Rica, Honduras, Panama. French Guiana, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Mato Grosso, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Misiones.

Parodiophyllochloa penicillata (Nees ex Trin.) Zuloaga & Morrone. *Systematic Botany* 33: 74 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum penicillatum* Nees ex Trin., *Gram. Pan.* :196 (1826). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Langsdorff*, see TRIN-0677.02, *Panicum discolor* Nees ex Trin..

Recent Synonyms: *Panicum discolor* Trin. ex Nees, non Bieler (1807), *Agrost. Bras.* 144. (1829).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (80: 180, Fig.36 (1993) as *Panicum*).

Derivation (Clifford & Bostock 2007): L. penicillus, a small brush; -ata, possessing. With racemes arising in verticils.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe MICROCALAMINAE.

Habit, Vegetative Morphology. Perennial. Culms leaning or scandent, 500–1000 cm long, rooting from lower nodes. Culm-internodes terete, solid, 8–18 cm long, distally glabrous. Culm-nodes brown, glabrous or pubescent. Lateral branches ample, arising from lower culm. Leaf-sheaths 10–14 cm long, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.5 mm long. Collar dark, glabrous or pubescent. Leaf-blade base asymmetrical, with a false petiole, petiole pubescent. Leaf-blades lanceolate, 18–32 cm long, 12–32 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle glabrous. Panicle open, ovate, effuse, 30–45 cm long, 20–40 cm wide. Panicle axis smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, flexuous, scaberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3–4.2 mm long, 1.1–1.4 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 2.8–3.6 mm long, 1 length of upper glume, 1 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume surface pubescent, hairy above, inner surface scabrous. Lower glume apex acuminate. Upper glume elliptic, 3–4 mm long, 1 length of spikelet, membranous, without keels, (7–)9–11 -veined. Upper glume lateral veins prominent. Upper glume surface pubescent, hairy above, inner surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 9–11 -veined, prominently veined, acute. Fertile lemma ovate, dorsally compressed, 3.2–3.7 mm long, 1–1.3 mm wide, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute, pubescent. Lemma apex apiculate, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 2.2–2.4 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

TDWG4. Minas Gerais, Rio de Janeiro, Espirito Santo.

Parodiophyllochloa rhizogona (Hack.) Zuluaga & Morrone. *Systematic Botany* 33: 74 (2008).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum rhizogonum* Hack., *Verh. Zool.-Bot. Ges. Wien*, 65: 73 (1915). T:<Type of Basionym>; *vide* TROPICOS and Kew Synonymy Database: ST: *C. Juergens G230*, Mar 1910, Brazil: Rio Grande do sul (W; IST: US-81108 (fragm. ex W)). ST: *C. Juergens s.n.*, Brazil: Fazenda Soledade, Municipio Ribas ST: *C. Juergens s.n.*, Mar, Brazil: Rio Grande do Sul: in sylvis prope Fachinal Bois, municipio Venancio Ayres (W; IST: B, BAA-1157 (fragm. ex B), US).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (734, Fig 154 as *Panicum*).

Illustrations (Journals): *Systematic Botany* (33: 71, Fig. 3 (2008)).

Derivation (Clifford & Bostock 2007): Gk. rhiza, a root; gony, knee. Runners root at the nodes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe MICROCALAMINAE.

Habit, Vegetative Morphology. Perennial. Culms rambling, 10–50 cm long, rooting from lower nodes. Culm-internodes elliptical in section, 2–7 cm long, distally glabrous or pubescent. Leaf-sheaths 1–3.5 cm long, mostly shorter than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.3–0.6 mm long. Leaf-blade base broadly rounded, asymmetrical, with a false petiole. Leaf-blades lanceolate or ovate, 4–9 cm long, 9–22 mm wide, mid-green or purple, discolorous with last colour beneath. Leaf-blade midrib evident. Leaf-blade surface glabrous or pubescent, sparsely hairy. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences different from terminal (cleistogamus), compact. Panicle open, ovate, 1.5–7 cm long, 1–6 cm wide. Panicle axis scabrous, glabrous or hispid. Panicle branches flexuous, scabrous, glabrous or hispid, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, smooth or scaberulous.

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, 2.6–3.3 mm long, 1.4–1.6 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.6–2.7 mm long, 0.5–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, dorsally compressed, 2.3–2.7 mm long, indurate, yellow, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface papillose. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ovoid, 1.6–1.8 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil Southeast, Brazil South.
TDWG4. Sao Paulo Parana, Catarina, Rio Grande do Sul. Misiones.

x Pascoleymus bowdenii (B.Boivin) Barkworth. *Sida* 22 (1): 499 (2006).

Basionym or Replaced Name: *XAgroelymus bowdenii* B. Boivin, *Naturaliste Canad.* 94(4): 520 (1967).
T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Canada: Alberta, Beaverlodge,.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (353).

Classification. Subfamily Pooideae.

Pascopyrum smithii (Rydb.) Barkworth & D.R. Dewey. *Amer. J. Bot.* 72(5): 772 (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 (as *Elymus*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Agropyron smithii* Rydb., *Mem. New York Bot. Gard.* 1: 64 (1900). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: USA: Upper Missouri [Rv.?], Geyer (HT: MO).

Recent Synonyms: *Elymus smithii* (Rydb.) Gould, *Madrono*, 9: 127 (1947).

Illustrations (Books): K.F.Best, et al, *Prairie Grasses* (1971) (41 as *Agropyron smithii*), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (352), F.W.Gould, *The Grasses of Texas* (1975) (169, Fig. 85 as *Agropyron smithii*).

Classification. Subfamily Pooideae. Tribe: Triticeae.

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Rhizomes elongated. Culms 30–90 cm long. Leaf-sheaths glabrous on surface or puberulous, outer margin glabrous or hairy. Leaf-sheath auricles absent or falcate. Ligule an eciliate membrane, 1 mm long, truncate. Leaf-blades involute, 2–7 mm wide, stiff, glaucous. Leaf-blade surface smooth or scabrous, rough adaxially, glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, bilateral, 6–20 cm long. Rhachis flattened, scabrous on margins. Spikelet packing broadside to rhachis, 0.5 their length apart. Rhachis internodes linear, 7–10 mm long. Spikelets appressed, solitary or in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic to oblong, laterally compressed, 15–25 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes scaberulous.

Glumes. Glumes collateral, persistent, similar, shorter than spikelet. Lower glume lanceolate, 10–12 mm long, 1 length of upper glume, coriaceous, without keels, 3–7 -veined. Lower glume apex setaceously acuminate. Upper glume lanceolate, 10–12 mm long, 1 length of adjacent fertile lemma, coriaceous, without keels, 5–7 -veined. Upper glume apex setaceously acuminate.

Florets. Fertile lemma lanceolate to oblong, 10 mm long, coriaceous, 5–7 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface glabrous or pubescent, hairy at base. Lemma margins eciliate or pubescent. Lemma apex acuminate, mucronate. Palea 1 length of lemma. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

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

$2n = 36$ (1 ref TROPICOS).

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Subarctic America, Western Canada, Eastern Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, South-central USA, Mexico.** Alberta, British Columbia, Manitoba, Saskatchewan. Ontario. Colorado, Idaho, Montana, Oregon, Washington, Wyoming. Illinois, Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin. Indiana, Michigan, Ohio. Arizona, California, Nevada, Utah. New Mexico, Texas. Northeast Mexico.

Coahuila.

Paspalidium albobillosum S. T. Blake. *Proc. Roy. Soc. Queensl.* lxii. 96 (1952).

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).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *S.T. Blake 10947*, 31 Mar 1936, Australia: Queensland: Maranoa Dist. (BRI; IT: CANB, L, US-2726312).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (322), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (211, Fig. 33), D.Sharp & B.K.Simon, *AusGrass. Grasses of Australia. CD-Rom Version 1.0.* (2002).

Derivation (Clifford & Bostock 2007): *L. albus*, white: villus, shaggy hair; -osum, abundance. Plant in whole or in part covered with long, white hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 25–50 cm long, compressible, 3–5 -noded. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths keeled, hirsute, with tubercle-based hairs, outer margin hairy. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blades 7–15 cm long, 1–4 mm wide. Leaf-blade surface hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 6–10, borne along a central axis, appressed, flexuous, unilateral, 1–3 cm long, simple or with branchlets at base of longer racemes. Central inflorescence axis 8–20 cm long, pilose, tip filiform. Rhachis angular, 0.25–0.4 mm wide, with scattered hairs, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 0.5–2 mm long. Spikelet packing abaxial, 2 -rowed. Spikelets ascending, solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–2.4 mm long, bearing a few hairs, 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, plano-convex, acute, 1.5–1.9 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume elliptic or orbicular, 0.9 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume lateral veins parallel at apex, all extending to apex. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic or ovate, 1.5–1.9 mm long, indurate, without keel. Lemma surface rugulose, with distinct germination flap. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. North, Central, South East. Coast, Western Slopes, Western Plains.

Paspalidium ankarensis A. Camus. *Bull. Soc. Bot. France*, 72: 706 (1925).

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

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar, Ankara: Perrier 11133.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 40–50 cm long. Culm-internodes striate, distally glabrous. Leaf-sheaths striately veined. Ligule a ciliate membrane. Leaf-blades erect, convolute, 4–8 cm long, 1.5 mm wide, stiff. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, borne along a central axis, erect, unilateral, 0.8–1.2 cm long. Central inflorescence axis 6–12 cm long. Rhachis angular, terminating in a barren extension, extension flattened. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, gibbous, acute, 2.2–2.3 mm long, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1.4–1.5 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate or ovate, 1.8–1.9 mm long, 0.75–0.8 length of spikelet, cartilaginous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate or ovate, 2.2–2.3 mm long, 1 length of spikelet, cartilaginous, 5 -veined, acute. Palea of lower sterile floret 2.2–2.3 mm long.

Fertile lemma lanceolate or ovate, 2.1–2.2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea reflexed at apex, 1 length of lemma, indurate.

Distribution (TDWG). Continent. Africa.

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

Paspalidium aversum Vickery. *Contrib. N. S. Wales Nat. Herb.* i. 331 (1951).

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: Tamworth, 18 Feb 1941, *T. P. May s.n.* (HT: NSW-8982).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (322), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (211, Fig. 33), 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. bent backwards. With spikelets bent backwards from the rachis.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Basal innovations extravaginal. Culms geniculately ascending or decumbent, weak, 40–90 cm long, compressible, 4–6 -noded, without nodal roots or rooting from lower nodes. Culm-internodes smooth or scaberulous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths keeled, glabrous on surface, outer margin glabrous or hairy. Ligule a ciliate membrane, 1 mm long. Leaf-blades 10–25 cm long, 3–8 mm wide. Leaf-blade surface scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, distant, flexuous, unilateral, 1–7 cm long, simple or with branchlets at base of longer racemes. Central inflorescence axis 10–30 cm long, tip filiform. Rhachis angular, scabrous on margins, terminating in a barren extension, extension bristle-like. Spikelet packing abaxial, crowded, 2 -rowed. Spikelets deflexed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.5 mm long, tip discoid.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, gibbous, acute, 2.5–2.75 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, gibbous, 0.33–0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex obtuse or acute. Upper glume oblong, 0.9 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma ovate, gibbous, 2.5–2.75 mm long, indurate, without keel. Lemma surface rugose, with distinct germination flap. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. North, Central, South East. Coast, Tablelands, Western Slopes, Western Plains.

Paspalidium basi cladum D.K.Hughes. *Kew Bull.* 1923, 318. (1923).

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: ST: *Stoward 200*, Australia: Western Australia: Kiminoppin ST: *Stoward 139*, Australia: Transcontinental Railway, east of Coolgardie ST: *Drummond s.n.*, Australia.

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (477, Fig 409 as *Setaria basi cladada*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): L. basis, base; Gk. klados, branch. Culms much branched from lower nodes.

Classification. Subfamily Panicoideae. Tribe: Paniceae.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 20–70 cm long, 3–6 -noded. Culm-nodes glabrous. Leaf-sheaths keeled, glabrous on surface. Ligule a fringe of hairs, 0.8–1.2 mm long. Leaf-blades flat or conduplicate, 4.5–18 cm long, 2–6 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, appressed, unilateral, 2–4.5 cm long, bearing 9–20 fertile spikelets on each. Central inflorescence axis 8–20 cm long, tip filiform. Rhachis angular, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 1.5–6 mm long. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.4–0.5 mm long, 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 oblong, dorsally compressed, plano-convex, 2.5–3 mm long, 1.1–1.3 mm wide, falling entire.

Glumes. Glumes shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 1.2–1.9 mm long, 0.5–0.66 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex obtuse. Upper glume elliptic, 2.3–2.8 mm long, 0.9–1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 2.2–2.9 mm long, 1 length of spikelet, membranous, 5–7 -veined, obtuse or acute. Fertile lemma elliptic, 2.3–2.8 mm long, indurate, without keel. Lemma surface rugose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, with a basal protruberance, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, South Australia, Queensland.

TDWG4. Eremean, South-West. Central Australia. NW & Lake Eyre, Southern. North, Inland.

Paspalidium breviflorum Vickery. *Telopea*, 1 (1): 40 (1975).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Australia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia: New South Wales: North Coast: Richmond River, May 1912, *Foster & Sons s.n.* (HT: NSW-8946)

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (322).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, weak, 20–40 cm long, 3–5 -noded, without nodal roots or rooting from lower nodes. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths keeled, glabrous on surface, outer margin hairy. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades 4–9 cm long, 2–3.5 mm wide. Leaf-blade surface scabrous, glabrous or pilose, sparsely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, flexuous, unilateral, 0.5–1.5 cm long. Central inflorescence axis 11–20 cm long, glabrous, tip filiform. Rhachis angular, 0.4 mm wide, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 1–2 mm long. Spikelet packing abaxial, crowded, 2 -rowed. Spikelets ascending, solitary. Fertile spikelets pedicelled. Pedicels present, 0.25–0.5 mm long, 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 orbicular, dorsally compressed, plano-convex, obtuse, 1.8–2 mm long, 1.2–1.3 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, gibbous, 0.4–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume orbicular, 0.9 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume lateral veins parallel at apex. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 5 -veined, with veins transversely connected at apex, obtuse. Fertile lemma elliptic, gibbous, 1.8–2 mm long, indurate, without keel. Lemma surface rugose, with distinct germination flap. Lemma margins involute. Lemma apex apiculate. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

Central, Inland. Tablelands.

Paspalidium caespitosum C.E.Hubb. *Kew Bull.* 1934, 446. (1934).

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>: *vide* TROPICOS and Kew Synonymy Database: Australia: Queensland: Darling Downs Dist.: near Goondiwindi, May 1933, *Hirschfield s.n.* (HT: K).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (322), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (211, Fig. 33), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. caespes*, grass that has been cut; -osa, abundance. Habit tufted.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, slender, 20–45 cm long, 3–6 -noded. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades involute or convolute, 10–25 cm long, 1–1.5 mm wide. Leaf-blade surface smooth or scaberulous, glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 7–10, borne along a central axis, flexuous, unilateral, 1–2.5 cm long. Central inflorescence axis 8–16 cm long, tip filiform. Rhachis angular, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 1–2 mm long. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.25–0.5 mm long, 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, plano-convex, subacute, 1.8–2.2 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.5 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex obtuse. Upper glume elliptic, 0.75 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 1.8–2.2 mm long, indurate, pallid, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface striate, rugulose. Lemma margins involute. Lemma apex apiculate. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. North, Central, South East, Inland. Western Slopes, Western Plains.

Paspalidium chapmanii (Vasey) R.W. Pohl. *Novon*, 2(2): 106: (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 USA. **Basionym or Replaced Name:** *Panicum chapmanii* Vasey, *Bull. Torrey Bot. Club* 11(6): 61 (1884). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *A.W. Chapman 1071*, USA: Florida (US-823762). LT: *H. Chapman s.n.*, USA: Florida: southern Florida (US-80518). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: 24 (1910).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (547 as *Setaria chapmanii*, *Panicum chapmanii*).

Derivation (Clifford & Bostock 2007): In honor of Alvan Wentworth Chapman (1809–1899) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 40–100 cm long. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths wider than blade at the collar, glabrous on surface, outer margin hairy. Ligule a fringe of hairs. Leaf-blades erect, flat or involute, 15–40 cm long, 2–5 mm wide, stiff. Leaf-blade surface scabrous, rough on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, distant, appressed, paucilateral, 1–3.5 cm long, bearing few fertile spikelets, bearing 8–15 fertile spikelets on each. Central inflorescence axis 15–35 cm long, tip with blunt extension. Rhachis subterete, terminating in a barren extension, extension bristle-like, extension 3–6 mm long. Spikelet packing abaxial, irregular. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret

male or barren, the upper fertile. Spikelets obovate, dorsally compressed, subacute, 1.8–2.2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume lateral veins with cross-veins. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, obtuse or acute. Fertile lemma elliptic, 1.8–2.2 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate. Palea surface rugose.

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

Country /Province /State. Southeastern USA, Mexico. Florida. Southeast Mexico. Mesoamerica, Caribbean. Bahamas, Cuba. Quintana Roo, Yucatan.

Paspalidium clementii (Domin) C.E.Hubb. *Kew Bull.* 1934, 447 (1934).

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:** *Panicum clementii* Domin, *J. Linn. Soc., Bot.* 41: 272 (1912). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: N.W. Australia: inter fl. Ashburton et Yule, *Dr. E. Clement. s.n.*.

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (478, Fig 410 as *Setaria clementii*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (323).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): in honor of E. Clement (-) who collected in Western Australia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, slender, 10–40 cm long, 3–5 -noded. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades 9–12 cm long, 3–4.5 mm wide. Leaf-blade surface scaberulous, glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–10, borne along a central axis, appressed, flexuous, unilateral, 2–4 cm long. Central inflorescence axis 3–25 cm long, tip filiform. Rhachis angular, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 1–2 mm long. Spikelet packing abaxial, irregular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.25–0.5 mm long, 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, plano-convex, obtuse, 1.8–2.2 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 0.5–0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse or acute. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, obtuse. Fertile lemma elliptic, 1.8–2.2 mm long, indurate, much thinner on margins, without keel. Lemma surface rugose. Lemma margins involute. Lemma apex apiculate. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Anthers 3, 0.8 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, South Australia, Queensland, New South Wales.

TDWG4. Eremean, South-West. Central Australia. NW & Lake Eyre, Southern. North, Inland. Western Plains.

Paspalidium constrictum (Domin) C.E.Hubb. *Kew Bull.* 1934, 447 (1934).

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:** *Panicum constrictum* Domin, *Biblioth. Bot.* 85: 302 (1915). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Queensland: Savannawalder bei Pentland, *Domin II 1910*.

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (479, Fig 411 and Pl. 17 as *Setaria constricta*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (323).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): L. constringo, bind together. Panicle branches held erect.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Basal innovations extravaginal. Culms erect, 10–60 cm long, 4–5 -noded. Culm-internodes distally pubescent. Culm-nodes pubescent. Lateral branches ample. Leaf-sheaths keeled, antrorsely scabrous, glabrous on surface or pilose, with tubercle-based hairs. Ligule a fringe of hairs, 1.25 mm long. Leaf-blades 7–15 cm long, 2–3 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous or pilose, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, unilateral, 2–3 cm long, bearing few fertile spikelets. Central inflorescence axis 7–15 cm long, pubescent, tip filiform. Rhachis angular, 0.4 mm wide, pubescent on surface, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 3–6 mm long. Spikelet packing abaxial, irregular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.25–1.5 mm long, 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, dorsally compressed, plano-convex, acute, 2.25–3.5 mm long, falling entire. Rhachilla internodes elongated between glumes or elongated below basal sterile floret or elongated below proximal fertile floret.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.6–0.66 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume surface glabrous or puberulous. Lower glume apex acute. Upper glume orbicular, 0.75–0.9 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, sulcate, acute. Fertile lemma elliptic, 2.25–3.5 mm long, indurate, without keel. Lemma surface rugulose, with distinct germination flap. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, South Australia, Queensland, New South Wales, Victoria.

TDWG4. Eremean, South-West. Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

Paspalidium criniforme S. T. Blake. *Proc. Roy. Soc. Queensl.* lxii. 98 (1952).

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>: *vide* TROPICOS and Kew Synonymy Database: IT: *S.T. Blake 5282*, 10 Mar 1934, Australia: Queensland, Moreton, Brisbane (L).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (323).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): L. crinum, hair; forma, appearance. Leaf-blades fine.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Rootstock evident. Basal innovations extravaginal. Culms geniculately ascending, slender, 10–60 cm long, 4–7 -noded, rooting from lower nodes. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths keeled, smooth, glabrous on surface or pilose, with tubercle-based hairs. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades flat or involute, 5–10 cm long, 1–2.5 mm wide. Leaf-blade surface scaberulous, glabrous or pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, appressed, flexuous, unilateral, 1–2 cm long, bearing few fertile spikelets, bearing 4–8 fertile spikelets on each, simple or secondarily branched. Central inflorescence axis 2.5–12 cm long, tip filiform. Rhachis angular, 0.15 mm wide, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 2 mm long. Spikelet

packing abaxial, distant, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–1 mm long, scabrous, 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 lanceolate or elliptic, dorsally compressed, plano-convex, acute, 2–2.25 mm long, 0.9–1 mm wide, falling entire. Rhachilla internodes elongated between glumes or elongated below basal sterile floret or elongated between basal sterile florets.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, without keels, 3(–5) -veined. Lower glume apex acute. Upper glume elliptic, 0.75–0.85 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, sulcate, acute. Fertile lemma elliptic, 2–2.25 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. Central, South East, Inland. Coast, Tablelands, Western Plains.

Paspalidium desertorum (A.Rich.) Stapf. *Prain, Fl. Trop. Afr.* ix. 585 (1920).

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

TYPE from Eritrea. **Basionym or Replaced Name:** *Panicum desertorum* A. Rich., *Tent. Fl. Abyss.* 2: 365–366 (1850)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Crescit in locis arenosis provinciae Choho, inter mare rubrum et Abyssiniam proprie dictam, *Quartin Dillon s.n.*

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. desertum, desert. Of deserts, that is, from arid places.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Stolons absent or present. Culms erect or geniculately ascending, 10–60 cm long. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 3–25 cm long, 1–4(–8) mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, unilateral, 0.5–4 cm long. Central inflorescence axis 5–30 cm long. Rhachis wingless, angular, 0.2–0.4 mm wide, glabrous on surface or puberulous on surface, terminating in a barren extension, extension subulate. Spikelet packing abaxial, regular, 2 -rowed. 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, acute, 1.7–2.6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex truncate or obtuse. Upper glume ovate, 0.75–1 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, 1.5–2.5 mm long, indurate, without keel, 5 -veined, more than 3-veined. Lemma surface granulose, unwrinkled or rugulose. Lemma margins involute. Palea reflexed at apex, indurate.

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

Country /Province /State. Northeast tropical Africa, East tropical Africa. Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya. **Arabian Peninsula.** Oman, Saudi Arabia.

Paspalidium disjunctum S. T. Blake. *Proc. Roy. Soc. Queensl.*, 84: 65 (1973).

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: Queensland: Taylor Range, *S.T. Blake 19899* (HT: BRI-131628).

Illustrations (Books): T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (211, Fig. 33), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. disjunco*, separate. Occurring in widely separated localities.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms erect or geniculately ascending, 35–70 cm long, 3–4 -noded. Culm-internodes smooth or scaberulous. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs, 0.4–0.5 mm long. Collar glabrous or pilose. Leaf-blades flat or involute, 7–15 cm long, 2–5 mm wide. Leaf-blade surface scaberulous, rough adaxially or on both sides. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 6–12, borne along a central axis, distant, unilateral, 0.5–1 cm long. Central inflorescence axis 7–25 cm long. Rhachis angular, 0.2–0.3 mm wide, scabrous on margins, terminating in a barren extension, extension subulate, extension 0.8–1.5 mm long. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.2–0.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, laterally compressed, gibbous, acute, 1.8–2.4 mm long, 1–2.5 mm wide, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume primary vein extending to apex. Lower glume apex acute. Upper glume ovate, gibbous, 0.6–0.8 length of spikelet, cartilaginous, without keels, 7–9 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, cartilaginous, 5 -veined, sulcate, obtuse. Palea of lower sterile floret 0.5–1 mm long. Fertile lemma elliptic, laterally compressed, gibbous, 1.8–2.4 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate.

Flower and Fruit. Anthers 3, 0.9 mm long.

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

Country /Province /State. Papuaia. New Guinea. **Australia.** Northern Territory, Queensland.

TDWG4. Darwin & Gulf. North, Central, South East, Inland.

Paspalidium distans (Trin.) D.K.Hughes. *Kew Bull.* 1923, 317 (1923).

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*) (as *Setaria*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Australia. **Basionym or Replaced Name:** *Panicum distans* Trin., *Sp. Gram.* 2(15): , t. 172 (1829). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *R. Brown 6098*, Australia (BM; IT: BRI (photo), K). LT designated by Blake, Proc. Royal Soc. Queensland 84: 66–67 (1973); cited in Veldkamp, *Blumea* 39: 376 (1994).

Recent Synonyms: *Setaria distans* (Trin.) J.F. Veldkamp, *Blumea* 39:376 (1994).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (323), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (328), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (211, Fig. 33), 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. disto*, be apart. Spikelets widely separated in inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, slender, 30–70(–100) cm long, 2–4 -noded. Culm-internodes smooth or scaberulous. Culm-nodes glabrous. Lateral branches sparse, extravaginal. Leaves basal and cauline. Leaf-sheaths without keel or keeled, glabrous on surface, outer margin glabrous or hairy. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades 5–15 cm long, 1–4 mm wide. Leaf-blade surface scaberulous, rough on both sides, glabrous or pilose, sparsely hairy, hairy abaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, borne along a central axis, distant, unilateral, 0.5–3 cm long. Central inflorescence axis 7–15 cm long, glabrous, tip filiform. Rhachis narrowly winged, angular, terminating in a barren extension, extension subulate, extension 1–2 mm long. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile or pedicelled. Pedicels absent or present, reduced to a stump, 0.25–0.5 mm long, 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 ovate, dorsally compressed, gibbous, acute, 1.8–2.2 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate to oblate, clasping, 0.33–0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex obtuse or acute. Upper glume ovate, 0.75 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, sulcate, acute. Fertile lemma ovate, 1.8–2.2 mm long, indurate, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface granulate, rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate. Palea surface granular.

Flower and Fruit. Anthers 3, 1 mm long.

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

Country /Province /State. Eastern Asia. Ogosawara-shoto. **Malesia, Papuasia.** New Guinea. **Australia.** Western Australia, Northern Territory, Queensland, New South Wales. **Southwestern Pacific, North-central Pacific.** New Caledonia. Hawaii.

TDWG4. Kimberley, Darwin & Gulf, Victoria R & Barkly Tableland. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

Paspalidium distantiflorum (A. Rich.) G. Davidse & R.W. Pohl. *Novon*, 2(2): 106: (1992).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Setaria*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Cuba. **Basionym or Replaced Name:** *Panicum distantiflorum* A. Rich., *Hist. Fis. Cuba, Bot.* 11: 302 (1850)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *R. de la Sagra s.n.*, no date, Cuba: in montosis ins. Cubae (P; IT: US-80652 (fragm. ex P)).

Recent Synonyms: *Setaria distantiflora* (A. Rich.) Pilger, *Engl. & Prantl, Nat. Pflanzenfam.* Aufl. 2, xiv e. 72 (1940).

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, slender, 30–80 cm long, wiry. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths smooth or scaberulous. Ligule a fringe of hairs. Leaf-blades flat or involute, 5–15 cm long, 1–3 mm wide. Leaf-blade surface puberulous, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, appressed, paucilateral, bearing few fertile spikelets, bearing 1–3 fertile spikelets on each. Central inflorescence axis 2–8 cm long, tip with blunt extension. Rhachis subterete, terminating in a barren extension, extension bristle-like, extension 1 mm long. Spikelet packing abaxial, irregular. Spikelets solitary. Fertile spikelets sessile.

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

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 0.66 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, obtuse or acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, 1.5 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate. Palea surface rugose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba, Venezuelan and Netherlands Antilles.

Paspalidium elegantulum (Mez) Henrard. *Blumea*, iii. 435 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from New Caledonia. **Basionym or Replaced Name:** *Panicum elegantulum* Mez, *Notizbl. Bot. Gart. Berlin-Dahlem* 7: 59 (1917). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Balansa* 893, Novo-Caledonia, in silvis prope Bourail ST: *Balansa* 3586, Novo-Caledonia, ad fluvii Dotio ripas.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. elegans*, elegant; -ulus, diminutive. Of attractive appearance.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 25–40 cm long. Ligule a fringe of hairs. Leaf-blades filiform, involute, 5–20 cm long, 1–1.5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, unilateral, 0.5–3 cm long. Central inflorescence axis 6–17 cm long, tip filiform. Rhachis angular, terminating in a barren extension, extension bristle-like. Spikelet packing abaxial, 2 -rowed. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, linear, terete.

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, plano-convex, 1.6–1.8 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 0.5 mm long, 0.33 length of spikelet, hyaline or membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume ovate, 1.6–1.8 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1.6–1.8 mm long, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 1.6–1.8 mm long, indurate, without keel. Lemma surface granulose, rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Southwestern Pacific. New Caledonia.

Paspalidium flavidum (Retz.) A.Camus. *Lecomte, Fl. Gen. Indo-Chine*, vii. 419 (1922).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*) (as *Setaria*), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Sri Lanka. **Basionym or Replaced Name:** *Panicum flavidum* Retz., *Observ. Bot.* 4: 15 (1786). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sri Lanka.; *Kvning. s.n. (in Herb. Retzius)* (HT: LD).

Recent Synonyms: *Setaria flavida* (Retz.) J.F. Veldkamp, *Blumea* 39:376 (1994).

Illustrations (Books): K.M.Mathew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (Pls.805 & 806), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982) (191, Fig. 21), H.J.Noltie, *The Grasses of Bhutan* (2000) (721, Fig. 43), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (29, Fig. 16), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 748), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:91(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *L. flavidus*, pale yellow. Spikelets yellow.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 30–100 cm long. Culm-nodes glabrous. Ligule a fringe of hairs. Leaf-blades 5–20 cm long, 4–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–9, borne along a central axis, distant, appressed, unilateral, 1–3 cm long. Central inflorescence axis 15–30 cm long. Rhachis narrowly winged, angular, terminating in a barren extension, extension flattened. Spikelet packing abaxial, crowded, regular, 2 -rowed. Spikelets spreading, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, laterally compressed, gibbous, acute, 2.5–3 mm long, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume orbicular, 0.33–0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume orbicular, 0.66–0.75 length of spikelet, cartilaginous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 1 length of spikelet, cartilaginous, 5 -veined, obtuse. Fertile lemma ovate, laterally compressed, gibbous, 2.5–3 mm long, indurate, without keel. Lemma surface granulose or striate. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate.

Flower and Fruit. Anthers 3, 2–2.2 mm long.

$N = 27$ (3 refs TROPICOS). $2n = 54$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, Australasia, Pacific.

Country /Province /State. Western Indian ocean. Mauritius, Madagascar, Reunion, Rodrigues. **Arabian Peninsula, China, Eastern Asia.** China South Central, Hainan, China Southeast. Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Bangladesh, Eastern Himalaya, India, Pakistan, Sri Lanka, West Himalaya. Andaman Is, Cambodia, Laos, Myanmar, Thailand, Vietnam. Java, Lesser Sunda Is, Malaya, Philippines, Sulawesi. New Guinea West Papua (Irian Jaya). New Guinea, Solomon Is. **Australia.** Queensland. **Northwestern Pacific.** Caroline Is, Marianas.

TDWG4. Guangdong, Guizhou, Yunnan. Darjeeling, Bhutan, Sikkim. Assam. Andhra Pradesh, Bihar, Goa, Gujarat, Kerala, Karnataka. Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamilnadu, Uttah Pradesh, West Bengal. Jammu Kashmir. North, Central, South East.

Paspalidium gausum S. T. Blake. *Proc. Roy. Soc. Queensl.*, 84: 68 (1973).

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: Queensland: prope Burpengary, *S.T. Blake 19914* (HT: BRI-131641–2).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (324), 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).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): Gk. gausos, bent. The spikelets are curved.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes short. Basal innovations extravaginal. Culms erect or geniculately ascending, 35–70 cm long, wiry, 2–4 -noded, without nodal roots or rooting from lower nodes. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths keeled, outer margin hairy. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades flat or conduplicate, 7–15 cm long, 2–3 mm wide, stiff. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–5, borne along a central axis, distant, appressed, unilateral, 0.5–1.5 cm long. Central inflorescence axis 10–20 cm long, tip filiform. Rhachis angular, scabrous on margins, terminating in a sterile spikelet or barren extension, extension bristle-like. Spikelet packing abaxial, crowded, 2 -rowed. Spikelets deflexed, solitary. Fertile spikelets pedicelled. Pedicels present, 0.5 mm long, scabrous, 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 oblong or ovate, dorsally compressed, gibbous, acute, 2.5–2.75 mm long, 1.5–2 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma, gaping. Lower glume orbicular, clasping, gibbous, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex obtuse. Upper glume elliptic, 0.8 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, sulcate, acute. Palea of lower sterile floret 0–0.5 length of lemma. Fertile lemma ovate, 2.5–2.75 mm long, indurate, yellow, without keel. Lemma surface rugose, with distinct germination flap. Lemma margins involute. Lemma apex apiculate. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. North, Central, South East. Coast.

Paspalidium geminatum (Forssk.) Stapf. *Prain, Fl. Trop. Afr.* ix. 583 (1920).

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),

J.F.Veldkamp, Poaceae ms (*Flora Malesiana*) (as *Setaria*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

TYPE from Egypt. **Basionym or Replaced Name:** *Setaria geminata* (Forssk.) J.F. Veldkamp, *Blumea* 39:377 (1994).

Illustrations (Books): R.M.Phillips, F.T.E.A., *Gramineae* (3(1982):553, Fig.133), G.V.Pope et al., *Flora Zambesiaca* 10, J.Bosser, *Gramineae des Paturage et des Cultures a Madagascar* (1969) (401, Fig. 152), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 410), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (244, Fig 98), L.Boulos, *Flora of Egypt* 4 (2005) (303, Pl. 89), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (235, Fig. 135), N.L.Bor, *Gramineae* in K.H.Rechinger, *Flora Iranica*. No. 70/30 (1970), K.M.Mathew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl. 809 & Pl. 810), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (562), F.W.Gould, *The Grasses of Texas* (1975) (499, fig. 263 as var. *geminatum*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (248, Fig. 197 as *Panicum*), S.A.Renvoize, *The Grasses of Bahia*, 1984 (186, Fig. 70), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (215, Fig. 168), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (399, Fig. 145 var. *geminatum* & var. *paludivagum*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (as *Digitaria appressa*), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 83, Fig. 4 (2006)), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (452, Fig. 81), E.Hafliger & E.Schultz, Grass Weeds, CIBA-GEIGY (1:92(1980)).

Illustrations (Journals): *Ruizia* (13:391 Fig 52d-f (1993)).

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

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated, spongy. Culms prostrate, 10–60 cm long, spongy, rooting from lower nodes. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 5–35 cm long, 2–13 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, appressed, unilateral, 0.5–4 cm long. Central inflorescence axis 5–30 cm long, flattened. Rhachis narrowly winged, with sharp-edged midrib, angular, 0.5–1 mm wide, terminating in a barren extension, extension inconspicuous. Spikelet packing abaxial, crowded, regular, 2-rowed. Spikelets appressed, solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 1.6–2.6 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume orbicular, 0.5 mm long, 0.3–0.5 length of upper glume, 0.2–0.4 length of spikelet, membranous, pallid, without keels, 0–5 -veined. Lower glume apex truncate. Upper glume elliptic, 0.6–0.8 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse or acute.

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 or acute. Fertile lemma elliptic, 1.2–2.4 mm long, indurate, dark brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface granulose. Lemma margins involute. Lemma apex obtuse or acute. Palea reflexed at apex, indurate.

Flower and Fruit. $N = 9$ (2 retd TROPICOS).

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

Country /Province /State. Northern Africa, Macaronesia, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Middle Atlantic ocean, Western Indian ocean. Egypt, Libya. Canary Is, Madeira. Ghana, Ivory Coast, Mali, Nigeria, Senegal, Niger. Rwanda, DRC. Chad, Ethiopia (inc. Eritrea), Socotra, Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia. Namibia, Kwazulu-Natal (?). St Helena. Comoros, Mauritius, Madagascar, Reunion, Rodrigues, Seychelles. **Western Asia, Arabian Peninsula.** Oman. **Indian Subcontinent, Indo-China, Malesia.** Pakistan, Sri Lanka. Andaman Is, Vietnam. Java, Lesser Sunda Is, Malaya. **North-central USA, South-central USA, Southeastern USA, Mexico.** Oklahoma. Texas. Georgia, South Carolina. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Aruba, Bahamas, Bermuda, Cayman Is (as *Panicum*), Cuba, Dominican Republic, Haiti, Jamaica (as *Panicum*), Leeward Is, Windward Islands (as *Panicum*), Puerto Rico, Trinidad-Tobago, Venezuelan and Netherlands Antilles. Guyana. Colombia, Ecuador, Galapagos, Peru. Brazil Northeast, Brazil Southeast.

TDWG4. Kerala. Madhya Pradesh, Tamilnadu. Tucuman. Buenos Aires, Chaco, Corrientes, Entre Rios, Formosa, La Pampa, Santa Fe. Mexico State, Morelos, Puebla, Tlaxcala. Aguascalientes, Coahuila, Durango,

Hidalgo, Nuevo Leon, San Luis Potosi, Tamaulipas, Zacatecas. Veracruz. Baja California, Baja California Sur, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalidium globoideum (Domin) D.K.Hughes. *Kew Bull.* 1923, 317 (1923).

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:** *Panicum globoideum* Domin, *Repert. Spec. Nov. Regni Veg.* 10: 119 (1911). T:<Type of Basionym>; *vide* TROPICOS and Kew Synonymy Database: LT: *Wuth. s.n.*, Queensland: Springsure (K). LT designated by ?; cited by Webster, *Sida* 16: 443 (1995).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (324), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (211, Fig. 33), 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. globus*, sphere; *Gk. -oideum*, resemblance. Spikelets globose.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rootstock evident. Culms erect, 30–70 cm long, 3–4 -noded. Culm-internodes channelled. Culm-nodes glabrous. Lateral branches sparse, arising from mid culm or upper culm. Leaf-sheaths keeled, striately veined, smooth or scaberulous. Ligule a ciliate membrane, 0.75 mm long, truncate. Leaf-blades 10–20 cm long, 3–6 mm wide. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, appressed, flexuous, unilateral, 2–5.5 cm long, bearing few fertile spikelets, simple or secondarily branched. Central inflorescence axis 7–18 cm long, tip filiform. Rhachis angular, scabrous on margins, terminating in a barren extension, extension bristle-like. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular, globose, dorsally compressed, gibbous, 3.5–4.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 0.33–0.5 length of spikelet, membranous, without keels, 7 -veined. Lower glume apex acute. Upper glume orbicular, 1 length of spikelet, membranous, without keels, 9–13 -veined. Upper glume lateral veins with cross-veins. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 9–11 -veined, with cross-veins, sulcate, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma ovate, 3.5–4.5 mm long, indurate, pallid, without keel. Lemma surface granulate, rough in lines. Lemma margins involute. Lemma apex apiculate. Palea reflexed at apex, indurate, 2-keeled.

Flower and Fruit. Caryopsis with adherent pericarp, orbicular. Embryo 0.66 length of caryopsis.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. North, Central, South East, Inland. Tablelands, Western Slopes, Western Plains.

Paspalidium gracile (R.Br.) D.K.Hughes. *Kew Bull.* 1923, 318 (1923).

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:** *Panicum gracile* R. Br., *Prodr.* 190 (1810).

Illustrations (Books): C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (247, Pl 73), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (602, Fig 122), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (324), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (211, Fig. 33), 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. slender*. Culms or inflorescences slender.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Basal innovations extravaginal. Culms erect, 10–80 cm long, wiry, 5 -noded. Culm-internodes smooth or scaberulous, distally glabrous or

pubescent. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths keeled, glabrous on surface or pilose, with tubercle-based hairs. Ligule a fringe of hairs, 1–1.25 mm long. Leaf-blades convolute, 7–14 cm long, 2–3.5 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, unilateral, 1–2 cm long, bearing few fertile spikelets. Central inflorescence axis 10–20 cm long, tip filiform. Rhachis angular, 0.15 mm wide, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 1–2 mm long. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–0.5 mm long, scabrous, 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 obovate, dorsally compressed, plano-convex, acute, 2–2.75 mm long, falling entire. Rhachilla internodes elongated between glumes or elongated below basal sterile floret or elongated between basal sterile florets.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume orbicular, 0.8 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic or obovate, 1 length of spikelet, membranous, 5 -veined, sulcate, acute. Fertile lemma elliptic or obovate, 2–2.75 mm long, indurate, without keel, 5 -veined, more than 3-veined. Lemma surface granulose, rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled.

Flower and Fruit. Caryopsis with adherent pericarp, orbicular. Embryo 0.5 length of caryopsis. Hilum punctiform.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales, Victoria.

TDWG4. Eremean. Victoria R & Barkly Tableland, Central Australia. Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

Paspalidium grandispiculatum B.K.Simon. *Austrobaileya*, 1(5): 465 (1983).

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: Queensland: 14 km N of Helidon, *Pearl 1990* (HT: BRI-255048; IT: BRI, CANB, K, L, MO, NSW).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (324), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (211, Fig. 33), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. *grandis*, large; *spiculus*, small spike; -*atum*, possessing. Spikelets large.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, woody. Culms 80–150 cm long, woody, 7–9 -noded. Culm-internodes glaucous, distally pruinose or glabrous. Lateral branches sparse. Leaf-sheaths without keel, glabrous on surface. Ligule a fringe of hairs, 1 mm long. Leaf-blades flat or conduplicate, 4–5 cm long, 2–3 mm wide. Leaf-blade surface scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–8, borne along a central axis, unilateral, 0.5–3 cm long, bearing few fertile spikelets. Central inflorescence axis 8–16 cm long, puberulous. Rhachis angular, terminating in a barren extension, extension subulate, extension 2–4 mm long. Spikelet packing abaxial. Spikelets subtended by an involucre. Fertile spikelets pedicelled. Involucre composed of bristles. Involucral bristles persistent, 1 in principal whorl, 1 per spikelet, 3–4 mm long. Pedicels present, oblong, 0.5–1 mm long, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3.5–4.5 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 0.5 length of spikelet, scarious, without keels, 5–7 -veined. Lower glume surface asperulous. Lower glume apex obtuse. Upper glume elliptic, 0.75 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume primary vein scaberulous. Upper glume apex obtuse or acute.

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, scaberulous, obtuse. Fertile lemma elliptic, 3–4 mm long, indurate, without keel, 5–7 -veined, more than 3-veined. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled.

Flower and Fruit. Anthers 3, 2.5 mm long. Caryopsis with adherent pericarp, 3 mm long. Embryo 0.2 length of caryopsis.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. South East.

Paspalidium johnsonii B.K.Simon. *Austrobaileya* 8: 212 (2010).

TYPE from Australia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Queensland. Burke District: Amphitheatre, 40 km N of Musselbrook Mining camp, 3 May 1995, *R.W.Johnson MRS792 & M.B.Thomas* (holo: BRI; iso: DNA, K).

Illustrations (Journals): *Austrobaileya* (8: 208, Fig.3 (2010)).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Annual. Culms erect or decumbent, 7–20 cm long, 3–5 -noded. Leaf-sheaths outer margin glabrous. Ligule a fringe of hairs. Leaf-blades involute, 1–4 cm long, 5–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, single (apparently, when racemes reduced to 1 spikelet) or borne along a central axis, appressed, unilateral, 0.4–0.6 cm long, bearing few fertile spikelets, bearing 1(–2) fertile spikelets on each. Central inflorescence axis 1.5–4 cm long. Rhachis narrowly winged, angular, terminating in a barren extension, extension subulate, extension 0.7–0.8 mm long. Spikelet packing abaxial. Spikelets solitary or subtended by an involucre (actually the extension of a 1-spikelet raceme). Fertile spikelets sessile. Involucre composed of bristles, 0.7–0.8 mm long. Involucral bristles 1 per spikelet.

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, plano-convex, 2.1–2.5 mm long, 0.9–1 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.5 mm long, 0.75 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex truncate. Upper glume elliptic, 2.1–2.5 mm long, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 2.1–2.4 mm long, indurate, yellow, without keel. Lemma surface rugose. Lemma margins involute. Lemma apex acute. Palea indurate. Palea surface rugose.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

North.

Paspalidium jubiflorum (Trin.) D.K.Hughes. *Kew Bull.* 1923, 317. (1923).

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).

TYPE from Australia. **Basionym or Replaced Name:** *Panicum jubiflorum* Trin., *Gram. Panic.* 130 (1826). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Lindley s.n.*, Australia (CGE?).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (481, Fig 414 as *Setaria jubiflora*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (602, Fig 122), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (325), 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. jubum, mane; flos, flower. Inflorescence mane-like.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Rootstock evident. Basal innovations extravaginal. Culms erect or geniculately ascending, 30–120 cm long, 5 -noded. Culm-nodes glabrous. Lateral branches lacking or sparse or ample. Leaf-sheaths keeled. Ligule a ciliate membrane, 1 mm long. Leaf-blades 10–25 cm long, 2.5–10 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 6–16, borne along a central axis, distant, appressed, flexuous, unilateral, 1–4 cm long, simple or with branchlets at base of longer racemes. Central inflorescence axis 8–16 cm long, tip filiform. Rhachis angular, scabrous on margins, terminating in a barren extension, extension bristle-like. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.25–0.5 mm long, 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, plano-convex, acute, 2.5–3 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume orbicular, clasping, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acute. Upper glume elliptic, 0.75–0.9 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, sulcate, acute. Fertile lemma elliptic or ovate, 2.5–3 mm long, indurate, pallid or light brown, without keel. Lemma surface striate, rugulose, with distinct germination flap. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales, Victoria.

TDWG4. Kimberley, Ereman, South-West. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern. Central, South East, Inland. Western Slopes, Western Plains.

Paspalidium leonis (E. Ekman) G. Davidse & R.W. Pohl. *Novon*, 2(2): 106: (1992).

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

TYPE from Cuba. **Basionym or Replaced Name:** *Panicum leonis* Ekman, *Man. Grasses W. Ind.* 295, f. 286 (1936). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman 13155*, 9 Sep 1921, Cuba: La Habana: between El Morro and Cojimar (US-1502160; IT: LE, NY-180345). IT: *E. L. Ekman 1038*, 9 Sep 1921, Cuba: Cojimar, near Habana (L, NY-18143).

Recent Synonyms: *Setaria leonis* (Ekman) Leon, *Contrib. Ocas. Mus. Hist. Nat. Col. de la Salle, Habana*, No. 8, 163 (1946).

Illustrations (Books): A.S. Hitchcock, *Manual of the Grasses of the West Indies* (1936) (295, Fig. 286 as *Panicum*).

Derivation (Clifford & Bostock 2007): In honor of Joseph Sylvestre Sauget-Barbier, also known as Brother, Frere or Hermano Leon (1871–1955) French-born cleric and Cuban botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Butt sheaths glabrous or pubescent. Culms erect or geniculately ascending, slender, 30–60 cm long. Culm-nodes pubescent. Lateral branches ample. Leaf-sheaths wider than blade at the collar, glabrous on surface, outer margin hairy. Ligule a fringe of hairs. Collar pubescent. Leaf-blades 5–15 cm long, 4–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, paucilateral, bearing few fertile spikelets. Central inflorescence axis 2–5 cm long, tip with blunt extension. Rhachis subterete, terminating in a barren extension, extension bristle-like, extension 0.2–2 mm long. Spikelet packing abaxial, irregular. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 1.7–2 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume elliptic, 0.66 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, obtuse or acute. Fertile lemma elliptic, 1.7–2 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate. Palea surface rugose.

Distribution (TDWG). Continent. South America.

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

Paspalidium obtusifolium (Delile) Simpson. *Ministr. Agric. Egypt, Techn. & Sc. Service, Bull. No. 93:10* (1930).

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

TYPE from Egypt. **Basionym or Replaced Name:** *Panicum obtusifolium* Delile, *Descr. Egypte, Hist. Nat.* 150, t. 5, f. 1 (1812). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: Egypt (Montpellier; IT: P-Desf.).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (367, Fig 315), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (244, Fig 154), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (as *Panicum*).

Derivation (Clifford & Bostock 2007): *L. obtusus*, blunt; folium, leaf. Apices of leaf-blades rounded.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated, spongy. Culms prostrate, 30–60 cm long, spongy, rooting from lower nodes. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 3–20 cm long, 4–12 mm wide. Leaf-blade apex obtuse or abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, unilateral, 1–3 cm long. Central inflorescence axis 10–30 cm long, flattened. Rhachis broadly winged, with sharp-edged midrib, 1–3 mm wide, terminating in a barren extension, extension flattened. Spikelet packing abaxial, crowded, regular, 2-rowed. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 3–4 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume orbicular, 0.1–0.25 length of spikelet, membranous, without keels, 0–5 -veined. Lower glume apex truncate. Upper glume elliptic, 0.33–0.5 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse or acute.

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 or acute. Fertile lemma elliptic, 3–4 mm long, indurate, without keel. Lemma surface granulose. Lemma margins involute. Palea reflexed at apex, indurate.

Flower and Fruit. *N* = 18 (3 refs TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northern Africa, West tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Algeria, Egypt, Morocco, Tunisia. Kenya, Tanzania. Malawi, Mozambique, Zambia. Namibia, Botswana, Limpopo, Kwazulu-Natal.

Paspalidium ophiticola (A. Hitchc. & E. Ekman) G. Davidse & R.W. Pohl. *Novon*, 2(2): 106: (1992).

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

TYPE from Cuba. **Basionym or Replaced Name:** *Panicum ophiticola* Hitchc. & Ekman, *Man. Grasses W. Ind.* 293, f. 282 (1936). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman 12712*, 2 Jan 1921, Cuba: Pinar del Río: Loma Cajalbana (US-1387464).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (293, Fig. 282 as *Panicum*).

Derivation (Clifford & Bostock 2007): *Gk. ophis*, serpent; *L. -cola*, dweller. Growing on serpentinite rocks.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect or geniculately ascending, slender, 30–50 cm long. Culm-nodes glabrous. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 5–10 cm long, 1–2 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes borne along a central axis, appressed, paucilateral, bearing few fertile spikelets. Central inflorescence axis 2–7 cm long, tip with blunt extension. Rhachis subterete, terminating in a barren extension, extension bristle-like, extension 0.5–1 mm long. Spikelet packing abaxial, irregular. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 2–2.8 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume elliptic, 0.75 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, obtuse or acute. Fertile lemma elliptic, 2–2.8 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate. Palea surface rugose.

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

Country /Province /State. Caribbean. Cuba.

Paspalidium paludivagum (Hitchcock & Chase) L. Parodi. *Gramin. Bonar. ed.* 3, 85, 89 (1939).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum paludivagum* Hitchc. & Chase, *Contr. U.S. Natl. Herb.* 15: 32–33, f. 13 (1910)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.V. Nash 746*, 16–31 May 1894, USA: Florida: Lake Co.: near Eustis (US-207685).

Illustrations (Books): E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (462, Fig. 164), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1074, Fig. 208), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (367, Fig. 153), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (539, Fig. 142), B.Rosengurt, *Gramineas Uruguayas I* (1970) (346, Fig. 149).

Derivation (Clifford & Bostock 2007): L. palus, swamp; vagum, wandering. Runners much branched and often submerged.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, spongy. Culms prostrate, 100–180 cm long, 4–5 mm diam., spongy, rooting from lower nodes. Culm-internodes 3–16 cm long. Leaf-sheaths longer than adjacent culm internode. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 5–35 cm long, 2–13 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 5–17, borne along a central axis, appressed, unilateral, 1–3 cm long. Central inflorescence axis 11–30 cm long, flattened. Rhachis narrowly winged, with sharp-edged midrib, angular, terminating in a barren extension, extension inconspicuous. Spikelet packing abaxial, crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, 2.6–3.2 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.6–0.8 mm long, 0.5 length of upper glume, 0.25 length of spikelet, membranous, pallid, without keels. Lower glume apex erose, truncate. Upper glume ovate, 1.2–1.6 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex erose, obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma lanceolate, 2.6–3.2 mm long, indurate, yellow, without keel. Lemma surface rugulose. Lemma margins involute. Palea reflexed at apex, indurate.

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

Country /Province /State. Mexico. Southwest Mexico. **Western South America, Brazil, Southern South America.** Brazil West Central, Brazil Southeast, Brazil South. Argentina Northeast.

TDWG4. Mato Grosso, Minas Gerais, Rio de Janeiro, Espirito Santo, Catarina, Rio Grande do Sul. Buenos Aires, Entre Rios. Jalisco, Michoacan, Nayarit.

Paspalidium pradanum (Leon) G. Davidse & R.W. Pohl. *Novon*, 2(2): 106: (1992).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Setaria*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Cuba. **Basionym or Replaced Name:** *Panicum pradanum* León, *Man. Grasses W. Ind.* 294, f. 284 (1936)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Bro. León 11710*, 17 Jul-4 Aug 1924, Cuba: Oriente: Mesa de Prada, lower Jauco Valley (US-1258962).

Recent Synonyms: *Setaria pradana* (Leon) Leon, *Contrib. Ocas. Mus. Hist. Nat. Col. de la Salle, Habana*, No. 8, 164 (1946).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (294, Fig. 284 as *Panicum*).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Enrique who collected in Prada, Cuba.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, slender, 50–90 cm long, wiry. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades curled or flexuous, involute, 15–20 cm long, 1–2 mm wide. Leaf-blade surface glabrous or pubescent, sparsely hairy, hairy adaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, distant, appressed, paucilateral, 0.5–2 cm long, bearing few fertile spikelets. Central inflorescence axis 15–35 cm long, tip with blunt extension. Rhachis subterete, terminating in a barren extension, extension bristle-like, extension 0.5–2 mm long. Spikelet packing abaxial, irregular. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 1.8–2 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.4 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume elliptic, 0.66 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, obtuse or acute. Fertile lemma elliptic, 1.8 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate. Palea surface rugose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba, Dominican Republic, Haiti, Puerto Rico.

Paspalidium punctatum (Burm.) A.Camus. *Lecomte, Fl. Gen. Indo-Chine*, vii. 419 (1922).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)* (as *Setaria*), T.G.Tutin et al, *Flora Europaea* 5 (1980), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from India. **Basionym or Replaced Name:** *Panicum punctatum* Burm. f., *Fl. Indica* 26 (1768)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: India:, *Plukenet s.n.* (LT: BM).

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (346, Fig 134), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (574), C-C Hsu, *Taiwan Grasses* (1975), K.M.Matthew, *Illustrations on the Flora of Tamilnadu Carnatic* (1982) (Pl.906 & 907), H.B.Gilliland, *Grasses of Malaya* (1971) (174, Fig 35), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 747), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:93(1980)).

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

Derivation (Clifford & Bostock 2007): L. pungo, prick; -ata, possessing. Glumes spotted with color.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated, spongy. Culms prostrate, 30–200 cm long, spongy, rooting from lower nodes. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 5–25 cm long, 3–8 mm wide. Leaf-blade apex abruptly acute or acute or acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 14–24, borne along a central axis, unilateral, 1–6 cm long. Central inflorescence axis 10–30 cm long, flattened. Rhachis narrowly winged, angular, 0.5–1.5 mm wide, terminating in a barren extension, extension subulate. Spikelet packing abaxial, crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2–3 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume orbicular, 0.25 length of spikelet, membranous, without keels, 0–5 -veined. Lower glume apex truncate. Upper glume elliptic, 0.1–0.75 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 0.8–1 length of spikelet, membranous, 5 -veined, distinctly veined or without lateral veins, obtuse or acute. Fertile lemma elliptic, 2–3 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Palea reflexed at apex, indurate.

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

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

Country /Province /State. East tropical Africa. Kenya, Tanzania. **China, Eastern Asia.** Hainan, China Southeast. Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Bangladesh, India, Pakistan, Sri Lanka. Cambodia, Laos, Myanmar, Thailand, Vietnam. Borneo, Java, Malaya, Philippines, Sumatra. New Guinea.

TDWG4. Fujian, Guangdong. Assam, Tripura. Andhra Pradesh, Bihar, Kerala. Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamilnadu, Uttah Pradesh, West Bengal. Jammu Kashmir.

Paspalidium rarum (R.Br.) D.K.Hughes. *Kew Bull.* 1923, 318 (1923).

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:** *Panicum rarum* R. Br., *Prodr.* 189 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R. Brown 6100*, 1803, Australia (BM; IT: US-80953 (fragm.)).

Illustrations (Books): J.R.Wheeler et al, *Flora of the Kimberley Region* (1992) (1201, Fig 340), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (325), 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. far apart. Spikelets far apart in panicle.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending or decumbent, 15–22(–37) cm long, 3–5 -noded, without nodal roots or rooting from lower nodes. Ligule a fringe of hairs. Leaf-blades flat or conduplicate, 3–8 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, single (apparently, when racemes reduced to 1 spikelet) or borne along a central axis, unilateral, 0.3–0.9 cm long, bearing few fertile spikelets, bearing 1–2(–4) fertile spikelets on each. Central inflorescence axis 5–10 cm long. Rhachis narrowly winged, angular, terminating in a barren extension, extension subulate, extension 2–4 mm long. Spikelet packing abaxial. Spikelets solitary or subtended by an involucre (actually the extension of a 1-spikelet raceme). Fertile spikelets sessile. Involucre composed of bristles, 2–3 mm long. Involucral bristles 1 per spikelet.

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 or acute, 3–3.5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.6 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma elliptic, 3–3.5 mm long, indurate, without keel. Lemma surface rugose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, with a basal protruberance, indurate, 2-keeled. Palea surface rugose.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, Queensland, New South Wales.

TDWG4. Kimberley, Eremean. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. North, Central, South East, Inland. Western Plains.

Paspalidium reflexum R.D. Webster. *Australian Paniceae (Poac.):* 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 Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Latz 4847*, Australia (NT).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (484, Fig 418 as *Setaria reflexa*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 20–55 cm long, 2–5 -noded. Culm-nodes glabrous. Leaf-sheaths keeled, smooth, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.6–0.9 mm long, truncate. Collar glabrous. Leaf-blades 8–26 cm long, 2–4.5 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade margins smooth, glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–10, borne along a central axis, deflexed, unilateral, 2–6 cm long, bearing 8–20 fertile spikelets on each. Central inflorescence axis 10–18 cm long, tip filiform. Rhachis angular, 0.5–0.65 mm wide, smooth on surface or scabrous on surface, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 2–4 mm long. Spikelet packing abaxial, lax, irregular. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.6 mm long, smooth or scaberulous.

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, plano-convex, 2.6–3.3 mm long, 1–1.1 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, clasping, 1.8–3.2 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Lower glume margins ciliolate. Lower glume apex obtuse or acute. Upper glume elliptic, 2.6–3.3 mm long, 1 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 2.6–3.3 mm long, 1 length of spikelet, membranous, 7 -veined, distinctly veined, with veins transversely connected at apex, acute. Fertile lemma elliptic, 2.5–3.2 mm long, indurate, without keel. Lemma lateral veins obscure. Lemma surface rugulose. Lemma margins involute. Lemma apex obtuse or acute, mucronate. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, South Australia.

TDWG4. Kimberley, Eremean. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern.

Paspalidium retiglume (Domin) D.K.Hughes. *Kew Bull.* 1923, 317 (1923).

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:** *Panicum retiglume* Domin, *Repert. Spec. Nov. Regni Veg.* 10: 119 (1911). T:<Type of Basionym>; *vide* TROPICOS and Kew Synonymy Database: HT: *F. Mueller s.n.*, Upper Victoria river, Australia (MEL; IT: K).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): retis, net; gluma, husk. Upper glume and lower lemma with reticulate venation.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 10–50 cm long, 2–3 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.7–1 mm long. Leaf-blades flat or involute, 4–10 cm long, 3–5 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, appressed, unilateral, 1.5–3 cm long, bearing 7–17 fertile spikelets on each. Central inflorescence axis 6.5–18 cm long, tip filiform. Rhachis narrowly winged, angular, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 1.7–2.4 mm long. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.5 mm long, scabrous, 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, plano-convex, 2.7–3.1 mm long, 1.4–1.6 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblong or ovate, 0.8–1.1 mm long, 0.33 length of spikelet, membranous, without keels, 5 -veined. Lower glume lateral veins prominent, transversely connected at apex. Lower glume apex truncate. Upper glume ovate, 2.5–2.9 mm long, 0.9 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 11–15 -veined. Upper glume lateral veins with cross-veins. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic or ovate, 2.7–3.1 mm long, 1 length of spikelet, membranous, 11 -veined, with cross-veins, acute or acuminate. Fertile lemma ovate, 2.6–3.1 mm long, indurate, without keel. Lemma surface rugose. Lemma margins involute. Lemma apex acute or acuminate. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley. Victoria R & Barkly Tableland. North.

Paspalidium scabrifolium S. T. Blake. *Proc. Roy. Soc. Queensl.* 84: 69 (1973).

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: HT: *S.T. Blake 19983*, Queensland: Prope Wowan, Australia (BRI; IT: L).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

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

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 50–100 cm long, 3–7 -noded. Culm-internodes elliptical in section. Lateral branches sparse. Leaf-sheaths longer than adjacent culm internode, keeled, pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.7–1.5 mm long. Collar pubescent or pilose. Leaf-blades linear or lanceolate, 8–30 cm long, 4–8 mm wide. Leaf-blade surface scabrous, rough on both sides, glabrous, hairless except near base. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, borne along a central axis, flexuous, unilateral, 1–3 cm long. Central inflorescence axis 10–30 cm long. Rhachis angular, 0.35–0.6 mm wide, terminating in a barren extension, extension subulate, extension 1–2 mm long. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.2–0.4 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without 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, laterally compressed, gibbous, acuminate, 1.9–2.3 mm long, 1.1–1.45 mm wide, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume primary vein extending to apex. Lower glume apex acuminate. Upper glume ovate, gibbous, 0.8–0.9 length of spikelet, cartilaginous, without keels, 7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret ovate, 1 length of spikelet, cartilaginous, 5 -veined, sulcate, obtuse. Palea of lower sterile floret 0.25–0.9 mm long. Fertile lemma elliptic, laterally compressed, gibbous, 1.9–2.3 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North, Central.

Paspalidium spartellum S. T. Blake. *Proc. Roy. Soc. Queensl.* lxii. 97 (1952).

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: Queensland, *S.T. Blake 9939* (HT: BRI).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *Gk. spartos*, broom; *L. -ellum*, diminutive. Resembling *Spartium junceum* on account of its wiry culms.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50 cm long, wiry, 5–8 -noded. Culm-internodes smooth, distally glabrous. Lateral branches ample. Leaf-sheaths mostly shorter than adjacent culm internode, without keel, striately veined, smooth, glabrous on surface. Ligule a fringe of hairs, 0.15 mm long. Leaf-blades spreading or reflexed, involute, 2–6 cm long, 0.5–1 mm wide, stiff. Leaf-blade surface scabrous, rough on both sides, glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, distant, appressed, unilateral, 0.5 cm long, bearing few fertile spikelets, bearing 1–2 fertile spikelets on each. Central inflorescence axis 1.5–2.5 cm long. Rhachis angular, 0.25 mm wide, scabrous on margins, terminating in a

barren extension, extension subulate, extension 0.5–1.5 mm long. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 0.4–0.6 mm long, scabrous, 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, laterally compressed, gibbous, acute, 2.9–3 mm long, 1.1–1.2 mm wide, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume primary vein extending to apex. Lower glume lateral veins prominent, convergent at apex. Lower glume apex acute. Upper glume ovate, gibbous, 0.75 length of spikelet, cartilaginous, without keels, 7 -veined. Upper glume lateral veins prominent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, cartilaginous, 7 -veined, acute. Fertile lemma elliptic, laterally compressed, gibbous, 2.9–3 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. Central, Inland.

Paspalidium subtransiens (A. Hitchc. & E. Ekman) G. Davidse & R.W. Pohl. *Novon*, 2(2): 106: (1992).

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

TYPE from Cuba. **Basionym or Replaced Name:** *Setaria subtransiens* Hitchc. & Ekman, *Man. Grasses W. Ind.* 351, f. 323 (1936)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman 16828*, 27 Jun 1923, Cuba: Santa Clara: in thickets on serpentine, Cuabales, Motembo, Las Villas (US-1161839; IT: MO(as #1043)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (352, Fig. 323as *Setaria*).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 60–100 cm long. Culm-nodes glabrous or pubescent. Leaf-sheaths keeled, glabrous on surface. Leaf-sheath auricles absent or erect. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blades erect, flat or involute, 10–20 cm long, 1–3 mm wide. Leaf-blade surface puberulous, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, appressed, paucilateral, 1–2 cm long, bearing few fertile spikelets. Central inflorescence axis 5–15 cm long, tip with blunt extension. Rhachis subterete, terminating in a barren extension, extension bristle-like, extension 5 mm long. Spikelet packing abaxial, irregular. Spikelets subtended by an involucre. Fertile spikelets sessile. Involucre composed of bristles, 5 mm long. Involucral bristles persistent, 1 per spikelet.

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

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.33 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume elliptic, 0.5 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, obtuse or acute. Fertile lemma elliptic, 2–2.5 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acuminate. Palea reflexed at apex, indurate. Palea surface rugose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Paspalidium tabulatum (Hack.) C.E.Hubb. *Kew Bull.* 1934, 448 (1934).

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:** *Panicum tabulatum* Hack., *Bot. Jahrb. Syst.* 6: 234 (1885). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Neumann s.n.*, 29 Apr 1875, Australia: Western Australia (K; IT: US-81289 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. tabula*, table; *-ata*, possessing. Palea oblong.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms erect, 40–60 cm long, 4–7 -noded. Culm-nodes glabrous. Leaf-sheaths keeled, glabrous on surface. Ligule a fringe of hairs, 0.35–0.45 mm long. Leaf-blades conduplicate, 5–8 cm long, 1.5–3 mm wide. Leaf-blade surface scabrous, glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, appressed, unilateral, 0.5–1.2 cm long, bearing few fertile spikelets, bearing 2–5 fertile spikelets on each. Central inflorescence axis 7.5–9 cm long, tip filiform. Rhachis angular, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 1.5–3 mm long. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.4–1.5 mm long, smooth or scaberulous, 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 lanceolate, laterally compressed, plano-convex, 3.5–4.4 mm long, 0.8–0.9 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.7–0.85 mm long, 0.2 length of spikelet, membranous, without keels, 5–7 -veined. Lower glume apex obtuse or acute. Upper glume lanceolate, 3.5–4.4 mm long, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 3.5–4.4 mm long, 1 length of spikelet, membranous, 11–13 -veined, sulcate, obtuse or acute. Fertile lemma elliptic, 2.1–2.3 mm long, indurate, without keel. Lemma surface rugose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia.

TDWG4. Eremean.

Paspalidium udum S. T. Blake. *Proc. Roy. Soc. Queensl.* lxii. 98 (1952).

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: HT: *S.T. Blake 16659*, 28 Jul 1946, Australia: Northern Territory (BRI; IT: CANB, L, US-2726310).

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. damp*. Growing in swampy areas.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect or decumbent, 40–90 cm long, spongy, 6–10 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 1–1.3 mm long. Leaf-blades flat or involute, 15–20 cm long, 5–11 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, appressed, unilateral, 1.5–2 cm long, bearing 7–13 fertile spikelets on each, secondarily branched. Central inflorescence axis 12–19 cm long, tip filiform. Rhachis narrowly winged, angular, scabrous on margins, terminating in a barren extension, extension bristle-like, extension 2–4 mm long. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.25–0.35 mm long, 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, dorsally compressed, plano-convex, 2.7–3 mm long, 1.1–1.4 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblong, 0.4–0.6 mm long, 0.1–0.2 length of spikelet, hyaline or membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume elliptic or obovate, 1.7–2 mm long, 0.66 length of spikelet, hyaline or membranous, without keels, 3–5 -veined. Upper glume apex truncate or obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 2.7–3 mm long, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 2.5–2.9 mm long, indurate, without keel. Lemma surface rugose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate, 2-keeled. Palea surface rugose.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Northern Territory, Queensland.

TDWG4. Darwin & Gulf. North, Central.

Paspalidium utowanaeum (Scribner) G. Davidse & R.W. Pohl. *Novon*, 2(2): 106: (1992).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Setaria*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

Basionym or Replaced Name: *Setaria utowanaea* (Scribn.) Pilger, in Engl. & Prantl, *Nat. Pflanzenfam. Aufl.* 2, 14e. 72 (1940).

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

Illustrations (Journals): *Darwiniana* (37: 112, Fig.20 (1999) as *Setaria*).

Derivation (Clifford & Bostock 2007): commemorating the yacht "Utowana" on which several United States scientists visited the Caribbaean.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms slender, 25–50 cm long. Leaf-sheaths wider than blade at the collar. Ligule a fringe of hairs. Leaf-blades erect or spreading, 10–20 cm long, 1–3 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, distant, appressed, paucilateral, 1–3 cm long, bearing few fertile spikelets. Central inflorescence axis 6–12 cm long, tip with blunt extension. Rhachis subterete, terminating in a barren extension, extension bristle-like, extension 2–4 mm long. Spikelet packing abaxial, irregular. Spikelets solitary or subtended by an involucre. Fertile spikelets sessile. Involucre composed of bristles, 4 mm long. Involucral bristles persistent, 0–1 per spikelet.

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 oblong, dorsally compressed, subacute, 2 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 0.33–0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume elliptic, 0.66 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, obtuse or acute. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma elliptic, 2 mm long, indurate, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex acute. Palea reflexed at apex, indurate. Palea surface rugose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America, Western South America. Cuba, Leeward Is, Puerto Rico. Surinam, Venezuela. Colombia.

Paspalidium vaillantii Jac.- Fel.

TYPE from Gabon.

Recent Synonyms: *Setaria variifolia* (Swallen) G. Davidse, *Ann. Missouri Bot. Gard.* 68(1): 226 (1981).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (241, Fig. 169).

Derivation (Clifford & Bostock 2007): In honor of Sebastian Vaillant (1669–1722) French botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. Congo.

Paspalum achlyophilum (Soderstr.)S. Denham. *Ann. Missouri Bot. Gard.* 92(4): 478 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya achlyophila* Soderstr., *Mem. N. Y. Bot. Gard.* 12. No. 3, 4 (1965).
T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: R.S. Cowan & T.R. Soderstrom

2166, 13 Mar 1962, Guyana: Kaiteur Plateau, bottom of Potaro Gorge near Kaiteur Falls to western rim of splash-basin of falls, ca. 700 ft (US-2380408, photo SI; IT: K, NY).

Illustrations (Books): E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig.110 as *Thrasya achlysophila*).

Derivation (Clifford & Bostock 2007): Gk *achlys*, mist; *phileo*, love. Grows on wet rocks adjacent to waterfalls.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 10–25 cm long. Culm-nodes glabrous. Leaf-sheaths longer than adjacent culm internode, keeled. Ligule an eciliate membrane, 1.5 mm long, erose. Leaf-blades lanceolate, 3–8 cm long, 5–8 mm wide. Leaf-blade surface pilose, densely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, arcuate, unilateral, 2–3 cm long. Rhachis narrowly winged, 1.2 mm wide, glabrous on surface, pubescent on margins, terminating in a barren extension, extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 1-rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, 2.4–2.6 mm long, 1.1 mm wide, falling entire. Spikelet callus square, 0.5 mm long, pubescent.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.2–0.5 mm long, 0.1–0.2 length of spikelet, hyaline, without keels, 0-veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 0.75–0.8 length of spikelet, chartaceous, without keels, 7-veined. Upper glume surface pilose. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong or obovate, 1 length of spikelet, membranous, 4-veined, sulcate, acute. Fertile lemma ovate, 2.4 mm long, coriaceous, without keel. Lemma surface papillose or striate. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

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

Paspalum acuminatum Raddi. *Agrost. Bras.* 25. (1823).

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.*, Brazil: Guanabara: prope Rio de Janeiro (PI; IT: BAA (fragm. ex FI), FI, K, PI, US-2941966 (fragm. ex FI & photo)).

Recent Synonyms: *Paspalum serratum* Hitchc. & Chase, *Contr. U.S. Natl. Herb.* 18 (7): 306 (1917)

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (574), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (918, Fig. 184 & 931, Fig. 187), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (377, Fig. 156), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (405, Fig. 146).

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

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 35–65 cm long, 1–1.5 mm diam., rooting from lower nodes. Culm-internodes elliptical in section, solid, distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–2 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 3–13 cm long, 4–12 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–5, single or paired or digitate, unilateral, 2.5–5 cm long. Rhachis broadly winged, foliaceous, 2.5–3 mm wide, scabrous on margins. Spikelet packing abaxial, 2-rowed. 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, compressed strongly, acuminate, 3.2–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1.2 length of fertile lemma, 1 length of spikelet, membranous, 5 -veined, with unevenly spaced veins (close to margin). Fertile lemma obovate, 2.4–3 mm long, indurate, yellow, without keel. Lemma surface scaberulous. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1–1.2 mm long, purple. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

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

Country /Province /State. **South-central USA, Southeastern USA, Mexico.** Texas. Alabama, Florida, Georgia, Louisiana. Central Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Costa Rica, Guatemala, Honduras. Cuba, Jamaica. Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Southeast, Brazil South. Argentina Northeast, Argentina Northwest, Paraguay.

TDWG4. Mato Grosso, Minas Gerais, Rio de Janeiro, Espirito Santo, Catarina, Rio Grande do Sul. Jujuy, Tucuman. Chaco, Corrientes, Entre Rios, Formosa, Misiones, Santa Fe. Morelos, Puebla. Veracruz. Michoacan. Tabasco.

Paspalum acutifolium Leon. *Mem. Torr. Bot. Cl.* xvi. 58 (1920).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Bro. Leon & M. Roca 8164*, 10 Aug 1918, Cuba. Santa Clara: Sabana de Motembo (US-1060709).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (215, Fig. 154).

Derivation (Clifford & Bostock 2007): *L. acuo*, sharpen; *folium*, leaf. Leaf-blades sharply tapering.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 20–48 cm long. Culm-nodes bearded. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths keeled, pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades 6–17 cm long, 4–8 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, borne along a central axis, unilateral, 2–8 cm long. Central inflorescence axis 1–3.5 cm long. Rhachis wingless, angular, 0.7 mm wide. Spikelets in pairs. 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, turgidly plano-convex, obtuse, 1.8 mm long, 0.9–1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, purple, without keels, 3 -veined. Upper glume margins eciliate or pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, purple, 3 -veined, concave across back, eciliate on margins or pubescent on margins, obtuse. Fertile lemma ovate, 1.6 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4.

Paspalum acutum Chase. *Journ. Wash. Acad. Sc.* xvii. 146. (1927).

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: *E.P. Killip 4003*, 18 Sep 1917, Panama: Canal Zone, Ancon (US-1037443).

Illustrations (Books): No illustration found (BKS).

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

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

Habit, Vegetative Morphology. Perennial. Culms robust, 100–200 cm long. Lateral branches lacking. Leaves basal and cauline. Leaf-sheaths as wide as blade at the collar, striately veined, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades 30–75 cm long, 14–18 mm wide. Leaf-blade surface pubescent, sparsely hairy, hairy adaxially. Leaf-blade margins spinulose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, drooping, unilateral, 8–12 cm long. Central inflorescence axis 5–15 cm long. Rhachis wingless, angular, 1–1.5 mm wide, scabrous on margins, glabrous on margins. Raceme-bases brief, hirsute. Spikelets in pairs. 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, dorsally compressed, plano-convex, acute, 3.5–3.9 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, dark green, without keels, 5 -veined. Upper glume surface glabrous or puberulous. Upper glume margins eciliate or ciliate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, dark green, 5 -veined, with unevenly spaced veins (near margin), eciliate on margins or ciliate on margins, acute. Fertile lemma elliptic, 3 mm long, 1.8 mm wide, indurate, pallid or yellow, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Gulf (Mexico). **Mesoamerica, Brazil.** El Salvador, Panama. Brazil West Central, Brazil North.

Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso. Veracruz.

Paspalum adoperiens (Fourn.) Chase. *Contrib. U. S. Nat. Herb.* xxviii. 102 (1929).

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. **Basionym or Replaced Name:** *Dimorphostachys adoperiens* E. Fourn., *Mexic. Pl.* 2: 15 (1886)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Schaffner 271*, Mexico. Veracruz: Orizaba (P; IT: NY, US-865867 (fragm. ex P)).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 480: Fig.7 (2005)).

Derivation (Clifford & Bostock 2007): *L. adoperio*, cover. Plants forming a dense sward.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 35–95 cm long. Culm-internodes elliptical in section, ridged, distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades ascending, 5–22 cm long, 8–16 mm wide. Leaf-blade surface glabrous or hispid, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, without bracts or bracteate at branch bases. Racemes 2–4, borne along a central axis, unilateral, 3–7.5 cm long. Central inflorescence axis 1–7 cm long. Rhachis wingless, angular, 0.8 mm wide, with scattered hairs or glabrous on surface. Spikelet packing crowded. Spikelets in pairs. Fertile spikelets sessile and 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 orbicular or obovate, dorsally compressed, plano-convex, obtuse, 2.1–2.5 mm long, 1.7–1.8 mm wide, falling entire.

Glumes. Glumes one to two the lower present in some spikelets or two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1–0.5 length of spikelet, membranous. Lower glume apex obtuse or acute. Upper glume elliptic, 0.8 length of spikelet, membranous, without keels, 5 -veined. Upper glume primary vein eciliate or pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, glabrous or puberulous, hairy on veins, obtuse. Fertile lemma elliptic or orbicular, 2–2.2 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica.** El Salvador, Guatemala, Honduras, Nicaragua. Durango. Veracruz. Sinaloa. Oaxaca. Chiapas.

Paspalum affine Steud. *Syn. Pl. Gram.* 24 (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 Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.D. Buchinger* 92, 1845, Mexico: Oaxaca (CN; IT: US-2941968 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. allied to. Closely allied to another species.

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

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending or decumbent, 100–200 cm long, without nodal roots or rooting from lower nodes. Culm-internodes elliptical in section, distally glabrous. Culm-nodes pubescent. Lateral branches lacking or sparse. Leaf-sheaths keeled, glabrous on surface or hispid, with tubercle-based hairs. Ligule an eciliate membrane, 2 mm long. Leaf-blades ascending or spreading, 15–50 cm long, 12–23 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 10–31, borne along a central axis, ascending or drooping, arcuate, unilateral, 4–11 cm long. Central inflorescence axis 8–18 cm long. Rhachis wingless, angular, 0.5–0.7 mm wide. Spikelet packing crowded. Raceme-bases brief, hirsute. Spikelets in pairs. Fertile spikelets sessile and 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 obovate, dorsally compressed, plano-convex, subacute, 2–2.3 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, dark green, without keels, 3 -veined. Upper glume surface puberulous. Upper glume margins pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, dark green, 3 -veined, acute. Fertile lemma elliptic, 2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica.** Guatemala, Honduras. Mexico State, Puebla. Hidalgo. Veracruz. Oaxaca. Chiapas.

Paspalum agnesiae L.B. Sm. & Wassh. *Bradea* 2(35): 246, f. 3 (1978).

Regarded by K as a synonym (*P. juergensii*).

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

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L.B. Smith & R. Klein* 11618, 20 Feb 1957, Brazil: Santa Catarina: Chapeco Mun., Fazenda Campo Sao Vicente, 24 km west of Campo Ere (US-2237593; IT: HBR, R).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1051, Fig 205).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 50–85 cm long. Culm-internodes distally glabrous. Culm-nodes constricted, black. Lateral branches lacking. Leaf-sheaths keeled, pubescent. Ligule an eciliate membrane. Leaf-blades 5–15 cm long, 4–5 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, unilateral, 3–7 cm long. Central inflorescence axis 7–12 cm long. Rhachis angular, with scattered hairs. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, obtuse or subacute, 1.5 mm long, 1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 1.5 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil South. Catarina, Rio Grande do Sul.

Paspalum alaini León. *Fl. Cuba* 1: 141 (1946).

Regarded by K as a synonym (*P. caespitosum*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Leon & Alain 19199*, Jul 1940, Cuba. Oriente: Cayo La Plancha, Sierra de Nipe (US-2241898).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Enrique E. Alain (1916-) also known as Brother or Hermano Alain or Liogier, Cuban cleric and plant collector.

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

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Bahamas, Bermuda, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico.

Paspalum albidulum Henrard. *Rec. Trav. Bot. Neerl.* ix. 143 (1942).

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 Surinam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H.E. Rombouts 395G*, 20 Jan 1936, Suriname: Upper Sipaliwini River, Camp B (U; IT: L, US-1914581).

Illustrations (Books): E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (483, Fig 84).

Derivation (Clifford & Bostock 2007): *L. albidus*, whitish; *-ulum*, diminutive. Whole plant glaucescent.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–100 cm long. Leaves mostly basal. Ligule an eciliate membrane, 0.5 mm long, pubescent on abaxial surface. Leaf-blades 20–28 cm long, 3–4 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Peduncle 10 cm long. Racemes 8–12, borne along a central axis, unilateral, 6–7.5 cm long. Central inflorescence axis 10–12 cm long. Rhachis 0.3–0.5 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flexuous, 1–1.8 mm long, ciliate, hairy at base.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2–2.4 mm long, falling entire.

Glumes. Glumes one to two the lower present in some spikelets, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0–1.5 mm long, 0–0.6 length of upper glume. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 5–7 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3–5 -veined, with 2 longitudinal grooves. Fertile lemma elliptic, 2–2.4 mm long, indurate, pallid, without keel. Lemma surface granulose. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum alcalinum Mez. *Fedde, Repert.* xv. 75 (1917).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: C.G. Pringle 3764, 14 Jul 1891, Mexico: San Luis Potosí: alkaline meadows, Hacienda de Angostura (B; IT: B, M, MA, MEXU, MO-2354872, P, US-928970, US-741529, US-2941970 (fragm. ex B), W).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (97: 14, Fig.1 (2010)).

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 80–150 cm long. Leaf-sheaths smooth, outer margin glabrous or hairy. Ligule an eciliate membrane, 5–6 mm long, lacerate. Leaf-blades erect, 15–50 cm long, 3–7 mm wide. Leaf-blade surface smooth or scaberulous, rough adaxially. Leaf-blade margins glabrous or ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 5–12, borne along a central axis, unilateral, 4–7 cm long. Spikelets in pairs. Fertile spikelets sessile and 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, dorsally compressed, plano-convex, acute, 3 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, yellow or light brown, without keels, 5 -veined. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, yellow or light brown, pubescent, acute. Fertile lemma elliptic, gibbous, 3 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 40$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Northeast Mexico, Southeast Mexico. **Western South America, Southern South America.** Colombia. Argentina Northeast, Paraguay.

TDWG4. Salta, Santiago del Estero. Chaco, Corrientes, Distrito Federal, Formosa, Santa Fe. San Luis Potosi. Yucatan.

Paspalum alnum Chase. *Journ. Wash. Acad. Sc.* xxiii. 137. (1933).

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 USA. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: J.F. Combs s.n., 8 Sep 1932, USA: Texas: Jefferson Co., near Beaumont (US-1535768; IT: L, US-1535769, US-1816872).

Recent Synonyms: *Paspalum hexastachyum* Parodi, *Notas Mus. La Plata, Bot.* 3: 25, f. 2 (1938).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (576), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1033, Fig. 201), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (397, Fig. 166), B.Rosengurt, *Gramineas Uruguayas I* (1970) (360, Fig. 154).

Derivation (Clifford & Bostock 2007): L. nourishing. A nutritious forage grass.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 25–50 cm long. Ligule an eciliate membrane, 2 mm long. Leaf-blades flat or conduplicate, 2–5 mm wide. Leaf-blade margins tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–3), paired, unilateral, 4–9 cm long. Central inflorescence axis 0.5–1.5 cm long. Rhachis narrowly winged, flattened, 1 mm wide. Spikelet packing abaxial, 3 -rowed. 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 ovate or obovate, dorsally compressed, subacute, 2.9–3.4 mm long, 1.8–2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic, 2.9–3.4 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 24$ (3 refs TROPICOS).

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

Country /Province /State. South-central USA, Southeastern USA. Texas. Louisiana. **Brazil, Southern South America.** Brazil West Central, Brazil South. Paraguay, Uruguay.

TDWG4. Mato Grosso, Catarina, Rio Grande do Sul. Chaco, Corrientes, Entre Rios, Formosa, Misiones, Santa Fe.

Paspalum alterniflorum A.Rich. *Fl. Cub. Fanerog.* ii. 299. (1850).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R. de la Sagra s.n.*, no date, Cuba (P; IT: US-2941971 (fragm. ex P)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (218, Fig. 159).

Derivation (Clifford & Bostock 2007): *L. alternus*, placed alternately; *flos*, flower. The spikelets clearly in two rows on one side of the axis.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 30–100 cm long. Lateral branches lacking or sparse, arising from lower culm. Leaf-sheaths without keel, glabrous on surface. Leaf-sheath oral hairs lacking or ciliate. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades involute, 4–10 cm long, 1–1.5 mm wide. Leaf-blade surface puberulous, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 1–5, single or paired or borne along a central axis, unilateral, 4–10 cm long. Central inflorescence axis 1–6 cm long. Rhachis wingless, angular, 1–1.5 mm wide. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate, dorsally compressed, plano-convex, acute, 2 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, hairy below. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, smooth or wrinkled, pubescent, hairy below, acute. Fertile lemma obovate, 1.8 mm long, 1 mm wide, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum alstonii Chase. *Journ. Wash. Acad. Sc.* xxvii. 144. (1937).

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: Mazaruni Distr., collected in moist sandy crevices on rocks in the open, ca. 75 m, Macreba Falls, Kurapung River, 3 Sept 1925, *R. A. Altson* 392 (HT: US-1539437).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (227, Fig. 169).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 483: Fig.9 (2005)).

Derivation (Clifford & Bostock 2007): In honor of Ralph Abbey Altson (fl. 1925) who collected in British Guiana, now Guyana.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 35–70 cm long, without nodal roots or rooting from lower nodes. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 1–3 mm long, brown. Leaf-blades linear or

lanceolate, 6–25 cm long, 7–12 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Peduncle 3–7 cm long. Racemes 1, single, arcuate, unilateral, 3–6 cm long. Rhachis angular, 0.3–0.9 mm wide. Spikelet packing 2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled, heteromorphic (upper spikelet with smaller lower glume). 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, dorsally compressed, plano-convex, 2–2.8 mm long, falling entire.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume oblong or ovate, 0.3–1 mm long, 0.15–0.33 length of upper glume. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or puberulous. Upper glume margins eciliate or ciliate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3–5 -veined, without grooves or sulcate, glabrous or puberulous, eciliate on margins or ciliate on margins. Fertile lemma elliptic, 2–2.8 mm long, indurate, yellow, without keel. Lemma surface granulate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum ammodes Trin. *Gram. Panic.* 120. (1826).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *G.H. von Langsdorff s.n.*, Brazil: Minas Gerais: pr. Tejuco, in arenosis (LE-TRIN-0415.01; IT: US-2941973).

Recent Synonyms: *Paspalum diamantinum* Swallen, *Phytologia* 14: 368 (1967).

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (208, Fig. 77), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (983, Fig 194).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (91: 232: Fig.3 (2004)).

Derivation (Clifford & Bostock 2007): Gk. ammos, sand. Growing in sandy soils.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 65 cm long. Culm-nodes bearded. Leaves mostly basal, without demarcation between sheath and blade. Leaf-sheaths pilose, outer margin hairy. Ligule an eciliate membrane, 0.6–0.7 mm long. Leaf-blades flat or conduplicate, 12–20 cm long, 1.5–2.5 mm wide. Leaf-blade surface pubescent, sparsely hairy.

Inflorescence. Inflorescence composed of racemes. Peduncle 10 cm long, glabrous. Racemes 6, digitate, unilateral, 2–3.5 cm long, 4 mm wide. Central inflorescence axis 3.5 cm long. Rhachis angular, 0.7 mm wide, smooth on margins. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5 mm long, tip cupuliform.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblanceolate, dorsally compressed, plano-convex, 3.3–3.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, mid-green or purple (margins), without keels, 5–6 -veined. Upper glume surface pilose, with tubercle-based hairs. Upper glume hairs 1–2 mm long. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, mid-green or purple (margins), 5–6 -veined, pilose, with tubercle-based hairs, bearing hairs 1–2 mm long, obtuse or acute. Fertile lemma lanceolate or elliptic, 3–3.3 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mato Grosso, Goiás, Bahia, Maranhão, Piauí, Minas Gerais, Rio de Janeiro, Espírito Santo, São Paulo Paraná.

Paspalum amphicarpum Ekman. *Contrib. U. S. Nat. Herb.* xxviii. 161 (1929).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman 17565 [Amer. Gr. Nat. Herb. 958]*, 8 Oct 1923, Cuba: Pinar del Río: edge of a pool near Laguna de Piedras, Pueblo Nuevo, Mangas, in water this species has elongate leaves and never flowers (US-1296159; IT: B, G, L, LL, MO-972934, NY-71063, P).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (226, Fig. 176).

Derivation (Clifford & Bostock 2007): Gk. *amphi-*, double; *karpos*, fruit. Inflorescences with both aerial and subterranean spikelets.

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

Habit, Vegetative Morphology. Perennial. Stolons present. Culms 30–40 cm long. Ligule a fringe of hairs. Leaf-blades 5–15 cm long, 3–6 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or borne along a central axis, unilateral, 2–4.5 cm long. Central inflorescence axis 0.5–1.5 cm long. Rhachis broadly winged, 1 mm wide, glabrous on margins. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 2.5–2.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 2–3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 2 -veined, obtuse. Fertile lemma elliptic, gibbous, 2.5–2.7 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Cleistogenes present, underground.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Paspalum anderssonii Mez. *Fedde, Repert.* xv. 71 (1917).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *N.J. Andersson s.n.*, 1852, Peru (B; IT: US-2941975 (fragm. ex B)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Nils Johan Andersson (1821–1880) Swedish botanist.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 100 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane. Leaf-blades erect. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, erect, unilateral, 6.5 cm long, bearing 20 fertile spikelets on each. Rhachis angular, scabrous on margins. Spikelet packing 4 -rowed. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, obtuse, 2.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.5 mm long, hyaline. Upper glume obovate, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic, 2.3 mm long, indurate, dark brown, shiny, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum apiculatum Doell. *Mart. Fl. Bras.* ii. II. 48. (1877).

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>: *vide* TROPICOS and Kew Synonymy Database: IT: *R. Spruce PASPALUM NO. 31*, Jan 1851, Brazil: Amazonas, Manaus (B, BM, K, P, US-2941980 (fragm. and photo ex P)).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (228, Fig. 171).

Derivation (Clifford & Bostock 2007): *L. apiculum*, small point; -ata, possessing. Glumes or lemmas sharp-pointed.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–40 cm long. Leaf-sheaths pilose. Ligule an eciliate membrane, 0.3 mm long. Leaf-blades lanceolate, 3–8 cm long, 3–7 mm wide. Leaf-blade surface pilose, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 1–3, single or paired or borne along a central axis, unilateral, 2–4 cm long. Central inflorescence axis 0.5–2 cm long. Rhachis narrowly winged, angular. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, obtuse, 1.7–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or pilose, with tubercle-based hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous or pilose, with tubercle-based hairs, obtuse. Fertile lemma elliptic, 1.7–2 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. Venezuela. Colombia. Brazil West Central, Brazil North. Amazonas, Acre, Rondonia.

Paspalum approximatum Döll. *Fl. Bras.* 2 (2): 82 (1877).

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *L. Riedel s.n.*; no date; Brazil: Minas Gerais (B; ILT: US-2942149 (fragm.), W) LT designated by F. Zuloaga & O. Morrone, *Cat. New World Grass.* 3: 446 (2003).

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

Distribution (TDWG). Continent. South America.

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

Paspalum arenarium Schrad. ex Schult. *Mant.* ii. 172. (1824).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *M.A.P. Wied-Neuwied 2512*, no date, Brazil (B; IT: G, US-2941985 (fragm. ex B)).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (228, Fig. 84), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1033 & 1037, Fig 201 & 203).

Derivation (Clifford & Bostock 2007): *L. arena*, sandy place; -aria, pertaining to. Of sandy habitats.

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

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms 40–70 cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane, 0.8 mm long. Leaf-blades lanceolate, 5–18 cm long, 7–14 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Peduncle 10–25 cm long. Racemes 1–3, single or paired or digitate, arcuate, unilateral, 4–7 cm long. Rhachis angular, 0.5–0.7 mm wide. Spikelet packing 2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.6–1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate or rhomboid, dorsally compressed, plano-convex, 1.2–1.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume primary vein absent. Upper glume lateral veins obscure. Upper glume surface glabrous or pubescent, with capitate hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 2 -veined, without midvein, obscurely veined, glabrous or pubescent, with capitate hairs. Fertile lemma elliptic, 1.2–1.3 mm long, indurate, light brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Para, Amapa, Bahia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Paspalum arsenei Chase. *Contrib. U. S. Nat. Herb.* xxviii. 63 (1929).

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: HT: *Bro. G. Arsène 1411*, 18 Jul 1907, Mexico: Puebla: Mayorazgo, sur l'Atoyac (US-1000431; IT: MO-841747).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Gustav Joseph Brouard Arshne (1867–1938) cleric and botanist who collected in New Mexico, USA.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 100–180 cm long, without nodal roots or rooting from lower nodes. Ligule an eciliate membrane, 3–4 mm long, brown. Leaf-blades 15–25 cm long, 8–12 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, borne along a central axis, unilateral, 2–6(–12) cm long. Rhachis narrowly winged, 1.2–1.4 mm wide. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, obtuse or subacute, 2.6–3.5 mm long, 1.6–2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, pubescent. Fertile lemma elliptic, 2.5–3.3 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico.

TDWG4. Puebla. Guanajuato, Hidalgo, Tamaulipas, Zacatecas. Jalisco, Michoacan, Nayarit.

Paspalum arundinaceum Poir. *Encyc. Suppl.* iv. 310. (1810).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: USA: Carolina, *M. Martin s.n.*Type locality published erroneously according to Chase, *Contr. U.S. Natl. Herb.* 28: 206 (1929)--actually is Cayenne on type specimen.

Recent Synonyms: *Paspalum secans* Hitchc. & Chase, *Contr. U.S. Natl. Herb.* 18 (7): 319 (1917)

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (233, Fig. 183).

Derivation (Clifford & Bostock 2007): *L. arundo*, reed; -acea, like. Culm tall, thereby resembling a reed.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 75–150 cm long. Culm-nodes purple. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 1.3–1.8 mm long, setose from base of abaxial surface. Leaf-blades 35–50 cm long, 5–7 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, unilateral, 10–17 cm long. Central inflorescence axis 6–10 cm long. Rhachis 0.5 mm wide, scabrous on margins. Spikelet packing 2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.5–1.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, 2.8–3.2 mm long, falling entire.

Glumes. Glumes one to two the lower present in some spikelets, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0–1.8 mm long, 0–0.5 length of spikelet. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma obovate, 2.8–3.2 mm long, indurate, yellow, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. North-central Pacific. Hawaii. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Honduras, Nicaragua. Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Puerto Rico. French Guiana, Guyana, Venezuela. Colombia. Brazil North.

Roraima, Mato Grosso.

***Paspalum arundinellum* Mez. Engl. Jahrb. lvi. Beibl. 125, 11 (1921).**

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: LT: *Fiebrig s.n.*, 1909, Paraguay (B; ILT: US-3169160). LT designated by F. Zuloaga & O. Morrone, *Cat. New. World Grass. 3: 446* (2003). ST: *Ule 8040*, Brazil: Hylaea (B; IST: BAA-2037 (fragm. ex B), US-0094086 (fragm. ex B), US-0094086 (fragm. ex K), US-1574191 (specimen ex B)). This specimen corresponds to *Paspalum arundinaceum* Poir not a syntype of *P. arundinellum*.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): The plants have the appearance of small reeds.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms robust, 150–200 cm long. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 3.5 mm long. Leaf-blades lanceolate, 45 cm long, 10 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 13–19, borne along a central axis, unilateral, 7–12.5 cm long. Rhachis wingless, angular, 1.6 mm wide, dark-coloured, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 2.6–2.9 mm long, 1.2–1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, dark brown, without keels, 3 -veined. Upper glume surface glabrous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, dark brown, 3 -veined, glabrous. Fertile lemma ovate, 2.6–2.8 mm long, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, oblong, 1.8 mm long.

$2n = 50$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil and Southern South America. Brazil West Central, Brazil Southeast.

TDWG4. Sao Paulo Parana. Chaco, Corrientes, Misiones.

Paspalum aspidiotes Trin. *Sp. Gram.* Ic. iii. t. 269 (1836).

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.H. von Langsdorff s.n.*, no date, Brazil (LE (photo, SI); IT: P, US-2942148 (fragm.)).

Recent Synonyms: *Paspalum setiglume* Chase, *Brittonia* 3(2): 150, f. 1 (1939).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (229, Fig. 173).

Derivation (Clifford & Bostock 2007): Gk *aspis*, shield; *-otes*, close connection. Upper glume shield-like.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–125 cm long. Ligule an eciliate membrane. Leaf-blades lanceolate, 12–20 cm long, 10–20 mm wide. Leaf-blade surface pilose, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Peduncle 10–15 cm long. Racemes 4–6, digitate, straight or arcuate, unilateral, 3–9 cm long. Central inflorescence axis 5 cm long. Rhachis narrowly winged, flattened, 2–3 mm wide. Spikelet packing abaxial, crowded, 2 -rowed. 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, with cordate base, dorsally compressed, plano-convex, obtuse, 6.5 mm long, 3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, auriculate at base (cordate), 1 length of spikelet, membranous, without keels, winged on margins, 7–9 -veined. Upper glume surface scabrous, puberulous, with an apical beard. Upper glume margins ciliate. Upper glume hairs 1.5–2.5 mm long. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, auriculate at base (cordate), 5 mm long, 0.9 length of spikelet, membranous, winged on margins, 3 -veined, scabrous, with conspicuous apical hairs, ciliate on margins, obtuse. Fertile lemma elliptic, 3.7 mm long, 1 mm wide, indurate, pallid, without keel. Lemma surface with conspicuous apical hairs. Lemma margins involute, pubescent. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, and Brazil. Brazil West Central, Brazil North, Brazil Southeast.

Paspalum atabapense G. Davidse & F. Zuloaga. *Novon*, 2(3): 193 (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 Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. Davidse, O. Huber & S.S. Tillett 17414*, 8 May 1979, Venezuela: Amazonas: Atabapo Dept.: SE bank of the middle part of Caño Yagua at Cucurital de Yagua, 3°36'N 66°34'W, 120 m, white sand savanna (MO-2769069; IT: IAN, SI, US-3208025, VEN).

Illustrations (Books): No illustration found (BKS).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 45–75 cm long, 2–3 -noded. Culm-nodes brown, glabrous or pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths without keel, striately veined, pilose, outer margin glabrous. Ligule an eciliate membrane, 0.5–1.2 mm long, erose. Leaf-blades filiform, involute, 6–18.5 cm long, 0.3–0.4 mm wide. Leaf-blade surface ribbed, grooved adaxially, scabrous, rough adaxially.

Inflorescence. Inflorescence composed of racemes. Peduncle 4–17 cm long, glabrous. Racemes 1, single, arcuate, unilateral, 3–9.5 cm long. Rhachis wingless, angular, 0.4–0.5 mm wide, glabrous on surface or puberulous on surface. Spikelet packing abaxial. Raceme-bases brief, pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.1–0.3 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 elliptic, dorsally compressed, plano-convex, 2.6–3.6 mm long, 1–1.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 2.4–3 mm long, 0.8–0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, pubescent. Fertile lemma elliptic, 2.6–3.5 mm long, 1–1.3 mm wide, chartaceous, yellow, without keel, 3 -veined, 0–3 -veined. Lemma surface papillose. Lemma margins involute. Palea involute, chartaceous.

Flower and Fruit. Anthers 3, 1.5–1.9 mm long, purple. Caryopsis with adherent pericarp, obovoid, 1.4–1.5 mm long. Embryo 0.4 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Paspalum atratum Swallen. *Phytologia*, xiv. 378 (1967).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 10842*, 7 Feb 1930–11 Feb 1930, Brazil: Mato Grosso: collected in moist spot in brushy campo, Campo Grande (US-1501223; IT: SI).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. ater*, dark; -ata, possessing. Anthoecia dark-colored.

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect or geniculately ascending, robust, 100–150 cm long. Culm-internodes elliptical in section. Ligule an eciliate membrane. Leaf-blades 35–65 cm long, 7–15 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 10–16, borne along a central axis, unilateral, 3–10 cm long. Central inflorescence axis 10–25 cm long. Rhachis 0.75–1 mm wide. Spikelet packing 4 -rowed. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, 2–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, wrinkled. Fertile lemma elliptic, 2–3 mm long, indurate, dark brown, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum auricomum (A.G.Burman) S. Denham. *Ann. Missouri Bot. Gard.* 92(4): 485 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya auricoma* A.G.Burman, *Brittonia*, 34(4): 461 (1982).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. aureus*, golden-yellow; *coma*, a head of hair. Leaf-blades golden yellow.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 35–40 cm long. Culm-nodes bearded. Leaf-sheaths mostly shorter than adjacent culm internode or longer than adjacent culm internode, keeled, hirsute, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades conduplicate, 6–20 cm long, 1 mm wide. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous or pilose above. Racemes 1, single, arcuate, unilateral, 1–4 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 3–4 mm

wide, pilose on surface, tuberculate on margins, ciliate on margins, terminating in a barren extension, extension flattened. Rhachis hairs yellow. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, 2 mm long, 0.6 mm wide, falling entire. Spikelet callus square, 0.5 mm long, pubescent.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.8–0.9 length of spikelet, membranous, without keels, 2 -veined. Upper glume surface glabrous or pilose, hairy at apex. Upper glume apex erose, truncate or acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic or oblong, 1 length of spikelet, coriaceous, 4 -veined, sulcate or readily splitting into two halves, ciliate on margins (above), acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 1.7 mm long, coriaceous, without keel. Lemma surface striate, with conspicuous apical hairs. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Paspalum azuayense Sohns. *Mem. N. Y. Bot. Gard.* ix. 140 (1955).

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 Ecuador. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Camp E-2313*, 26 Apr 1945, Ecuador: Azuay: between Ríos Azogotes and Gualaceo, valley of the Río Paute, between Paute and Cuenca, 2195–2438 m (US-2011130).

Illustrations (Books): No illustration found (BKS).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25–65 cm long. Culm-internodes striate, smooth. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, glabrous on surface or pilose, outer margin hairy. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades conduplicate, 2–12 cm long, 4–6 mm wide, glaucous. Leaf-blade surface pilose, sparsely hairy, hairy adaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, digitate, straight or flexuous, unilateral, 2.4–5 cm long. Central inflorescence axis 2 cm long. Rhachis angular, 0.9–1 mm wide, dark-coloured. Raceme-bases pilose. Spikelets in pairs. 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 ovate, dorsally compressed, plano-convex, 1.6–2.1 mm long, 1.2–1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.9 length of spikelet, membranous, dark brown, without keels. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, dark brown, pubescent, obtuse. Fertile lemma elliptic, 2 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum axillare Swallen. *Bull. Torr. Bot. Club.* 75: 84 (1948).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya axillaris* (Swallen) A.G.Burman ex E.J.Judziewicz, *Fl. Guianas, Ser. A*, 8(187): 630: (1990).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (284, Fig. 230 as *Thrasya*).

Derivation (Clifford & Bostock 2007): L. axillary. With panicles arising from the upper leaf axils.

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

Habit, Vegetative Morphology. Annual. Culms rambling, 20–40 cm long, 2–3 mm diam. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.6–0.9 mm long, acute. Leaf-blades 3–10 cm long, 1.5–2.7 mm wide. Leaf-blade surface glabrous or puberulous, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Peduncle 2–4 cm long. Racemes 1, single, unilateral, 1.8–3 cm long. Rhachis narrowly winged, 0.4–0.6 mm wide, terminating in a barren extension, extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly, reduced to a stump, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 0.9–1.1 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, hyaline, 3 -veined, obscurely veined, acute. Fertile lemma elliptic, 0.9–1.1 mm long, coriaceous, without keel. Lemma surface punctate. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. South America.

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

Paspalum bakeri Hack. *Fedde, Repert. Nov. Sp.*iv. 113. (1906).

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 Cuba. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Cuba: prope Habana, *C. F. Baker 1824* (HT: W).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (215, Fig. 155).

Derivation (Clifford & Bostock 2007): in honor of Charles Fullar Baker (1872–1927) United States botanist.

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

Habit, Vegetative Morphology. Perennial. Culms 20–55 cm long. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades flat or conduplicate, 2–10 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, borne along a central axis, unilateral, 2.5–7 cm long. Central inflorescence axis 1–5 cm long. Rhachis wingless, angular. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, obtuse, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, membranous, 5 -veined, glabrous, obtuse. Fertile lemma obovate, widest at 0.66 of its length from base, 2 mm long, 1.1 mm wide, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America. Bahamas, Cuba, Leeward Is. Venezuela.

Paspalum barbinode Hack. *Oesterr. Bot. Zeitschr.* 51:235 (1901).

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: A.F.M. Glaziou 25584, 1896, Brazil: Goiás (W; IT: G, K, NY-214975, US-2942152 (fragm. ex W), US-1445679 (fragm. ex P), US-1385235).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. barba, beard; nodus, knot. Nodes bearded.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 80 cm long, 2–3 -noded. Culm-nodes bearded. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades 15–30 cm long, 4–6 mm wide, stiff. Leaf-blade surface glabrous or pilose, hairy on both sides. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, arcuate, unilateral, 3–7 cm long. Central inflorescence axis 3–8 cm long. Rhachis angular. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, obtuse, 3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic, 3 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum barclayi Chase. *Contrib. U. S. Nat. Herb.* xxiv. 452 (1927).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: G.W. Barclay 311, 1836–1841, Peru: Callao (US-601295; IT: MO-3326803).

Illustrations (Journals): *Ruizia* (13:375 Fig 49h-j (1993)).

Derivation (Clifford & Bostock 2007): in honor of George W. Barclay (fl. 1835) Scots-born English gardener and traveller who collected widely in South America.

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

Habit, Vegetative Morphology. Perennial. Culms robust, 70–100 cm long. Culm-internodes elliptical in section, distally glabrous. Culm-nodes black, glabrous or bearded. Lateral branches lacking. Leaf-sheaths keeled, outer margin hairy. Ligule an eciliate membrane, 1.5–2 mm long, brown. Leaf-blade base broadly rounded. Leaf-blades 10–21 cm long, 10–20 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes, exerted or embraced at base by subtending leaf. Racemes 8–10, borne along a central axis, closely spaced, ascending, unilateral, 2.5–8 cm long. Central inflorescence axis 5–8 cm long. Rhachis wingless, angular, 1 mm wide, scabrous on margins. Spikelet packing abaxial. Raceme-bases brief, pilose. Spikelets in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, plano-convex, 2.8–3 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, exceeding apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex cuspidate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, cuspidate. Fertile lemma elliptic, 2.3–2.5 mm long, 1.3 mm wide, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum batianoffii B.K.Simon. *Austrobaileya*, 3(4): 598 (1992).

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>: *vide* TROPICOS and Kew Synonymy Database: Australia: Queensland: Port Curtis District: Statue Bay Beach, 6.5 km SE of Yeppoon, very narrow foredune with open woodland, 8 Sep 1977, *G.N. Batianoff & T.J. McDonald 651* (HT: BRI-AQ294456; BRI-294250, BRI-245882, BRI-245883).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Illustrations (Journals): *Austrobaileya* (3:601, Fig.7 (1992)).

Derivation (Clifford & Bostock 2007): in honor of George Nicholas Batianoff (1945-) of Russian origin but born in China, Australian botanist.

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

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 20–40 cm long, 2–3 -noded. Lateral branches sparse. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule an eciliate membrane, 1 mm long. Leaf-blades flat or convolute, 8–16 cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins smooth, tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 6–9 cm long. Central inflorescence axis 1.5–2.5 cm long. Rhachis narrowly winged, flattened, 2 mm wide. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5 mm long, smooth.

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, plano-convex, 4.5 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 4.5 mm long, 1 length of spikelet, cartilaginous, without keels, 2 -veined. Upper glume primary vein absent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 4.2 mm long, 1 length of spikelet, cartilaginous, acute. Fertile lemma elliptic, gibbous, 4 mm long, coriaceous, yellow, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex acute. Palea involute, coriaceous.

Flower and Fruit. Anthers 3, 2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. Central.

Paspalum bertonii Hack. *Fedde, Repert.* x. 165 (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Paraguay. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *M.S. Bertoni 2124*, 1906, Paraguay: in saxosis arenosis ad oras fluminis Paraná prope Puerto Bertoni et Salto Guairá, alt. 120–170 m (W). LT: *M.S. Bertoni 4054*, 22 Jul 1906, Paraguay: Alto Paraná (W; ILT: US-1125908). LT designated by F. Zuloaga & O. Morrone, *Cat. New. World Grass*. 3: 448 (2003). ST: *M.S. Bertoni 3888*, 1 Apr 1906, Paraguay: Alto Paraná (US-2854146, W).

Recent Synonyms: *Paspalum potamophilum* Renv., *Kew Bulletin* 42: 922 (1987).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (945, Fig 190).

Derivation (Clifford & Bostock 2007): in honor of Moisis de Blanquis Bertoni (fl. 1918–45) who collected in South America.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–50 cm long. Lateral branches lacking. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades filiform, involute, 10–25 cm long, 0.5–0.7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, erect, unilateral, 8–10 cm long. Central inflorescence axis 1–2 cm long. Rhachis narrowly winged, angular (wavy). Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret

male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, acute, 4.5 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, lanceolate, 1 length of spikelet, membranous, 3 -veined, pubescent, acute. Fertile lemma lanceolate or elliptic, gibbous, 2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. $N = 10$ (1 ref TROPICOS). $2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil South. Paraguay. Sao Paulo Parana.

Paspalum biaristatum T.S. Filgueiras & G. Davidse. *Novon*, 4(1): 18 (1994).

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.S. Filgueiras 2341, 10 Jun 1992, Brazil: Goiás: Niquelândia, Macedo, ca. 14°18' 483'W, 18 km N de Niquelândia, cerca de 80 cm de altura, raque cor verde (IBGE; IT: B, F, FLAS, ICN, ISC, K, MEXU, MO, P, R, RB, SI, SP, UB, US-3302711).

Illustrations (Journals): *Novon* (4: 19, Fig.1 (1994)).

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short, knotty. Culms geniculately ascending, 73–125 cm long, 6–9 -noded. Culm-internodes thin-walled, smooth or scaberulous. Culm-nodes brown, glabrous or pubescent. Lateral branches lacking or sparse. Leaves cauline. Leaf-sheaths without keel, striately veined, glabrous on surface or hirsute, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 1–1.5 mm long. Leaf-blades 7.2–19.3 cm long, 1.2–5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface hirsute, with tubercle-based hairs. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–4(–7), borne along a central axis, arcuate, unilateral, 3–8 cm long. Central inflorescence axis 4–5.8 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 9–14 mm wide, light-coloured (pallid & green), ciliate on margins, terminating in a barren extension, extension flattened. Spikelet packing abaxial. Raceme-bases brief, pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 3.8–4.5 mm long, 0.4–0.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 3.8–4.5 mm long, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy below. Upper glume margins ciliate. Upper glume hairs 1.7–2.2 mm long. Upper glume awned, 1 -awned, awn 4–7 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, pubescent, hairy below, ciliate on margins, bearing hairs 1.7–2.2 mm long, awned. Awn of lower sterile floret 3.8–4.5 mm long. Fertile lemma elliptic, 3.5–3.7 mm long, coriaceous, pallid, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins involute, ciliate, hairy above. Lemma hairs 0.5–1.2 mm long. Palea involute, 3.2–3.4 mm long, coriaceous. Palea apex papillose.

Flower and Fruit. Lodicules absent. Anthers 3, 2–2.2 mm long, yellow. Caryopsis with adherent pericarp, 1.2–1.5 mm long. Embryo 0.4–0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Paspalum bifidifolium Soderstr. *Mem. N. Y. Bot. Gard.* xii. No. 3, p. 3 (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: HT: R.S. Cowan & T.R. Soderstrom 2167, 13 Mar 1962, Guyana: Kaieteur Plateau, bottom of Potaro Gorge near Kaieteur Falls to western rim of splash-basin of Falls (US-2380409; IT: GH, K, NY, P, US-2382364).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. bifidus*, split into two parts; folium, leaf. Leaf-apices bifid.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms 15–30 cm long. Ligule an eciliate membrane, 0.5–0.7 mm long, truncate. Leaf-blades filiform, 9–11 cm long, 9–10 mm wide. Leaf-blade surface glabrous. Leaf-blade apex soon splitting or simple.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–4 cm long. Central inflorescence axis 0.5 cm long. Rhachis 0.7 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.4–0.7 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, subacute, 2–2.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined. Fertile lemma elliptic, 2–2.2 mm long, indurate, yellow, without keel. Lemma surface granulose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum bifidum (Bertol.) Nash. *Bull. Torr. Bot. Club*, 1897, 192 (1897).

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 USA. **Basionym or Replaced Name:** *Panicum bifidum* Bertol., *Mem. Reale Accad. Sci. Ist. Bologna* 2: 598, t. 41, f. 2, e-h (1850)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IGS: "No locality cited. *Plantae Alabamenses*".

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (589).

Derivation (Clifford & Bostock 2007): *L. bis*, twice; *findo*, divide. With structures such as panicle branches regularly bifurcating.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short, fleshy, woolly. Culms erect, 60–120 cm long. Leaf-sheaths hirsute. Ligule an eciliate membrane, lacerate. Leaf-blades 15–40 cm long, 4–12 mm wide. Leaf-blade surface glabrous or hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, borne along a central axis, flexuous, unilateral, 4–16 cm long. Rhachis wingless, angular. Spikelet packing lax, regular. Spikelets in pairs. 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, dorsally compressed, turgidly plano-convex, obtuse, 3.3–4 mm long, falling entire.

Glumes. Glumes one to two the lower present in some spikelets, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5–7 -veined, obtuse. Fertile lemma elliptic, 3.3–4 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. North-central USA, South-central USA, Southeastern USA. Texas. Arkansas, Florida, Georgia, Louisiana, North Carolina, South Carolina, Tennessee, Virginia.

Paspalum blodgettii Chapm. *Fl. S. U. St.* 571. (1860).

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 USA. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: USA: Florida, *Blodgett s.n.*.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (578), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (212, Fig. 151).

Derivation (Clifford & Bostock 2007): in honor of Charles Osgood Blodgett (1904-) United States agronomist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths herbaceous, not bulbous or thickened and forming a bulb. Culms erect, slender, 40–100 cm long. Culm-internodes distally glabrous. Culm-nodes constricted, black, glabrous or pubescent. Lateral branches lacking or sparse. Leaf-sheaths keeled, glabrous on surface or pubescent. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 5–25 cm long, 3–14 mm wide. Leaf-blade surface glabrous. Leaf-blade margins tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 2–12, borne along a central axis, arcuate, unilateral, 2–8 cm long. Rhachis wingless, angular, glabrous on surface. Spikelet packing crowded. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, obtuse, 1.3–1.4 mm long, 0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface pubescent, with capitate hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined, glabrous or pubescent, obtuse. Fertile lemma orbicular, 1.2–1.3 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Southeastern USA, Mexico. Florida. Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean.** Belize, Guatemala, Honduras, Panama. Bahamas, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico.

Tamaulipas. Veracruz. Oaxaca. Campeche, Chiapas, Quintana Roo, Yucatan.

Paspalum bonaireense Henrard. *Blumea*, v. 326 (1943).

TYPE from Netherlands Antilles. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *I. Boldingh* 7370, 1909–1910, Netherlands Antilles: Bonaire (U-12305; IT: U, US-2855342 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Provincia de Buenos Aires, Argentina.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Cataphylls evident. Culms erect, 40–50 cm long. Culm-internodes distally glabrous. Culm-nodes black, glabrous. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, keeled, glabrous on surface. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles erect. Ligule an eciliate membrane. Leaf-blades convolute, 30–40 cm long, 2 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes, embraced at base by subtending leaf. Racemes 4, borne along a central axis, unilateral. Rhachis angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, angular, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, acute, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, with obscure midvein, glabrous, truncate. Fertile lemma ovate, 2 mm long, indurate, pallid, without keel. Lemma surface scaberulous. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Venezuelan and Netherlands Antilles.

Paspalum bonplandianum Fluegge. *Gram.Monog.* 71. (1810).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Hb. Willd.*, no date, Peru (LE-TRIN-0423.01 (fragm. & illust. no. 135)). 135. *Paspal. Bonplandianum* (hb. Willd.): 1836 [by pencil]. HT: *F.W.H.A. von Humboldt & A.J.A. Bonpland 3081*, no date, Peru (B-W; IT: BM, P, P-Bonpl., US-2942159 (fragm. ex B-W, P-Bonpl, P)).

Illustrations (Books): G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 83, Fig. 4 (2006)).

Derivation (Clifford & Bostock 2007): L. -anum, indicating connection. In honor of Aimi Jacques Alexandri Bonpland (1773–1858) French-born Brazilian botanist.

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Stolons absent or present. Culms geniculately ascending, 20–35 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths hirsute. Ligule an eciliate membrane. Leaf-blades 4–8 cm long, 5–6 mm wide. Leaf-blade surface pubescent, densely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, ascending, unilateral, 1–2.5 cm long. Rhachis narrowly winged, 2–3 mm wide, dark-coloured (purple), pubescent on surface. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, pubescent.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2.7–3 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous. Fertile lemma elliptic, 2–2.5 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum botterii (E. Fourn.) Chase. *J. Wash. Acad. Sci.* 13(20): 436 (1923).

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. **Basionym or Replaced Name:** *Dimorphostachys botterii* E. Fourn., *Mexic. Pl.* 2: 14 (1886)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Botteri 118*, Aug, Mexico: Veracruz: Orizaba (P; IT: US-865864 (fragm. ex P)).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (406, Fig 147).

Derivation (Clifford & Bostock 2007): in honor of Mateo Botteri (1808–1877) Italian botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms 40–110 cm long, 1–3 mm diam. Culm-internodes thin-walled, distally glabrous. Culm-nodes brown, glabrous or pubescent. Lateral branches lacking or sparse. Leaf-sheaths keeled, hispid, with tubercle-based hairs, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1–1.5 mm long, brown. Collar pilose. Leaf-blade base cordate. Leaf-blades lanceolate, 17–44 cm long, 12–24 mm wide. Leaf-blade midrib conspicuous, keeled beneath. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 3–7, borne along a central axis, unilateral, 5–20 cm long. Central inflorescence axis 5–25 cm long. Rhachis narrowly winged, 1 mm wide, glabrous on margins or ciliate on margins. Spikelet packing crowded, irregular, 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. 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 obovate, dorsally compressed, obtuse, 2.2–2.5 mm long, falling entire.

Glumes. Glumes one to two the lower present in some spikelets (the subsessile), shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.5–1.6 mm long, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 0.8–0.9 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined. Fertile lemma elliptic or obovate, 2.2–2.4 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.7–1 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 1.2 mm long.

$2n = 80$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica.** Belize, Costa Rica, Guatemala, Honduras, Nicaragua.

TDWG4. Mexico State, Puebla, Morelos. Chihuahua, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum brachytrichum Hack. *Oesterr. Bot. Zeitschr.* 51:234 (1901).

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: *A.F.M. Glaziov 17906*, 21 Oct 1888, Brazil: Minas Gerais, Campos do Itabira (W; IT: K, P, US-2854142 (fragm. ex P), US-1645661 (fragm. ex W)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. brachys, short; thrix, hair. With short hairs on the glumes and, or lemmas.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–60 cm long, 3 -noded. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule an eciliate membrane, ciliate from base of abaxial surface, truncate. Leaf-blades filiform, convolute, 10–20 cm long, 0.6 mm wide, stiff. Leaf-blade surface pilose, hairy adaxially. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, arcuate, unilateral, 3–4.5 cm long. Central inflorescence axis 1–2 cm long. Rhachis angular. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, plano-convex, obtuse, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblong, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma oblong, 2.5 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum breve Chase. *Urb. Symb. Antill.* vii. 166 (1912).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Bro. Leon* 1996, 16 Nov 1910, Cuba: La Habana, near Marianao (US-690378; IT: P).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (224, Fig. 172).

Derivation (Clifford & Bostock 2007): L. short. Culms short.

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

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms slender, 5–10 cm long. Culm-nodes glabrous. Leaf-sheaths keeled, pubescent. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades flat or conduplicate, 3–6 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 0.8–1.5 cm long. Rhachis wingless, angular, 0.7 mm wide. Spikelet packing abaxial. 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, turgidly plano-convex, obtuse, 1.4 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma, shiny. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, 1.4 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum buchtienii Hack. *Fedde, Repert. Nov. Sp.* vi. 153 (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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Buchtien* 420, 1906, Bolivia: La Paz: Sud-Yungas, Sirupaya a Yanacachi (W; IT: K (photo), SI (fragm. ex US & photo), US-2854141 (fragm. ex W), US-1099147).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (Fig. 99).

Derivation (Clifford & Bostock 2007): in honor of Otto Buchtien (1859–1946) German botanist.

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 100–200 cm long. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 5–10 cm long, 4–8 mm wide, coriaceous. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 8–16, borne along a central axis, drooping, unilateral, 5–8 cm long. Rhachis angular, 0.5–1 mm wide. Spikelet packing distant, 2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2.5–3 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum burchellii Munro ex Doell. *Mart. Fl. Bras.* ii. II. 42. (1877).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *W.J. Burchell 6844*, no date, Brazil: Goiás (K; IT: BR, P, US-952238, US-33284, US-2942162 (fragm. ex BR, K, W), W, L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of William John Burchell (1781–1863), English traveller and plant collector in southern Africa and Brazil.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 15–20 cm long. Leaf-sheaths pilose. Ligule an eciliate membrane, 1–2 mm long, obtuse or acute. Leaf-blades linear or lanceolate, 3.5–8 cm long, 2–6 mm wide. Leaf-blade surface pilose, densely hairy, hairy on both sides. Leaf-blade apex acuminate or attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–6, borne along a central axis, arcuate, unilateral, 1–2.5 cm long. Rhachis broadly winged, foliaceous, folded longitudinally to embrace spikelets. Spikelet packing 2-rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or obovate, dorsally compressed, plano-convex, 1.2–1.4 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3-veined, acute. Fertile lemma oblong or obovate, 1.2–1.5 mm long, indurate, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum burmanii Filg., Morr. & Zuloaga. *Novon* 11:36 (2001).

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>: *vide* TROPICOS and Kew Synonymy Database: Brazil: Goiás: Mun. Niquelândia: 14°25'S, 48°26'W, planta ereta, margem da estrada entre Niquelândia e Macedo, cerradão próximo à mata ciliar, ca. 10 km N Niquelândia, estrada para Macedo, 20 maio 1993, *Filgueiras 2471* (HT:IBGE; IT: MO, SI, SP, US).

Illustrations (Journals): *Novon* (11: 38 Fig.1 (2001)).

Derivation (Clifford & Bostock 2007): In honor of Alisdair Graham Burman (1942–1992) English-born Brazilian botanist.

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, woody, scaly. Culms erect, robust, 150–200 cm long, woody. Culm-internodes terete, thin-walled, 7–18 cm long, smooth, distally glabrous. Culm-nodes brown, pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths 15–22 cm long, longer than adjacent culm internode, pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1.8–2.3 mm long, brown. Collar pubescent. Leaf-blades lanceolate, 30–35 cm long, 10–12 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pubescent, densely hairy, hairy on both sides. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle pubescent above. Racemes 7–11, borne along a central axis, ascending, unilateral, 6–9 cm long. Central inflorescence axis 10–18 cm long, flattened, glabrous. Rhachis broadly winged, 2.8–3 mm wide, glabrous on surface, scaberulous on margins, terminating in a barren extension. Spikelet packing 4-rowed. Raceme-bases pubescent. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, acute, 3–4 mm long, 1.2–1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, with cartilaginous margins (corky), without keels, 3 -

veined. Upper glume margins tuberculate, ciliate. Upper glume hairs white, 1–2 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 3.2–3.7 mm long, 1 length of spikelet, membranous, 5 -veined, sulcate, scaberulous, acute. Fertile lemma elliptic, gibbous, 2.8–3 mm long, 0.6–0.8 mm wide, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose (sparsely). Lemma margins involute. Palea gaping, involute, cartilaginous, 2 -veined.

Flower and Fruit. Lodicules 2, 0.2 mm long. Anthers 3, 1.8–2 mm long. Caryopsis with adherent pericarp, obovoid, 1.3–1.5 mm long, light brown. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Paspalum cachimboense Davidse, Morrone, Zuloaga. *Novon* 11(4): 389 (2001).

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: Mato Grosso: Mun. Colider: estrada Santarém-Cuiabá, BR-163, km 762, Serra do Cachimbo a 30 km da cidade de Garantã, 9°35'S, 54°55'W, 19 abr 1983, cerrado, campo aberto, solo pedregoso, *M.N. Silva, I.L. Amaral, J. Lima, O.P. Monteiro & J. Coêlho* 24 (HT: MO).

Illustrations (Journals): *Novon* (11: 390 Fig.1 (2001)).

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

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

Habit, Vegetative Morphology. Annual, herbaceous, or if woody then not a bamboo. Culms geniculately ascending, 20–60 cm long. Culm-internodes 5–11 cm long, distally glabrous. Culm-nodes brown, glabrous. Lateral branches ample, arising from mid culm and upper culm. Leaf-sheaths 5–8 cm long, mostly shorter than adjacent culm internode, without keel, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 2–3 mm long. Collar pilose. Leaf-blades 14–19 cm long, 4–6 mm wide. Leaf-blade surface pilose, hairy abaxially, with tubercle-based hairs. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, bracteate at branch bases. Peduncle 10–20 cm long, glabrous. Racemes 1–4, single or paired or digitate, unilateral, 5–7 cm long. Rhachis broadly winged, 2–3 mm wide, terminating in a barren extension. Spikelet packing abaxial, 2 -rowed. Raceme-bases pubescent. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, acute, 4–4.3 mm long, 1.1 mm wide, falling entire. Rhachilla internodes elongated below proximal fertile floret. Rhachilla elongation 0.2 mm long.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, chartaceous, without keels, 3 -veined. Upper glume surface pubescent, hairy at base. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, ribbed, tuberculate, setose, hairy above, ciliate on margins, fringed below, bearing hairs 1–2 mm long, obtuse. Fertile lemma elliptic, gibbous, 2.2–2.5 mm long, 0.8 mm wide, cartilaginous, pallid, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, cartilaginous.

Flower and Fruit. Lodicules 2, 0.3 mm long. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum caespitosum Fluegge. *Gram. Monog.* 161. (1870).

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 & Dominican Rep. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *P.A. Poiteau, P.J.F. Turpin*, 1803, Hispaniola I.: Dominican Republic: Santo Domingo (BM, P, US-2854139 (fragm. ex BM)). ST: *Mertens s.n.*, Guyana: Essequibo (LE; IT: US-951088 (fragm. ex LE)). Chase (1929) indicated this specimen probably does not belong to the type collection of this species.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (595), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (213, Fig. 152).

Derivation (Clifford & Bostock 2007): *L. caespes*, grass that has been cut; -osa, abundance. Habit tufted.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 35–70 cm long. Culm-internodes distally glabrous. Culm-nodes constricted, glabrous or pubescent. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades flat or involute, 5–25 cm long, 4–10 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 2–8, borne along a central axis, unilateral, 1–5 cm long. Rhachis wingless, angular. Spikelet packing 4 -rowed. Spikelets in pairs. 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, dorsally compressed, plano-convex, obtuse, 1.6–1.8 mm long, 0.8–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface glabrous or puberulous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous. Fertile lemma elliptic, 1.6–1.8 mm long, indurate, pallid, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Southeastern USA and Mexico. Alabama, Florida. Central Mexico, Northeast Mexico, Gulf (Mexico), Southeast Mexico. **Mesoamerica** and **Caribbean.** Belize, Guatemala, Honduras. Bahamas, Bermuda, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico.

Puebla. Queretaro, Tamaulipas. Veracruz. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum calliferum S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 501 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (*Thrasya robusta*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (*Thrasya robusta*).

Basionym or Replaced Name: *Thrasya robusta* Hitchcock & Chase, *Contrib. US. Nat. Herb.* xviii. 297 (1917).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (566, Fig 213 as *Thrasya robusta*).

Derivation (Clifford & Bostock 2007): *L. callus*, hard skin of an animal; *fero*, carry or bear. Base of spikelet callus-like.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, robust, 100–200 cm long. Culm-nodes bearded. Leaf-sheaths keeled, pubescent, outer margin hairy. Ligule an eciliate membrane, 1 mm long, truncate. Leaf-blades linear or lanceolate, flat or conduplicate, 15–30 cm long, 4–15 mm wide. Leaf-blade surface scaberulous, rough abaxially, puberulous, hairy adaxially. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1(–2), single or paired, arcuate, unilateral, 8–30 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 2 mm wide, glabrous on surface, glabrous on margins, terminating in a barren extension, extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 3.2–4 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.4(–2) mm long, 0.1(–0.6) length of spikelet, hyaline, without keels, 0(–1) -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 3.2–4 mm long, 1 length of spikelet, chartaceous, 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 elliptic or oblong, 1 length of spikelet, coriaceous, sulcate or readily splitting into two halves, ciliolate on margins, acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 3.1 mm long, coriaceous, without keel. Lemma surface papillose or striate. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America. Costa Rica, Panama. French Guiana, Surinam, Venezuela. Colombia.

Paspalum campinarum T.S. Filgueiras & G. Davidse. *Novon*, 5(2): 146 (1996).

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: C.E. Calderón, O.P.Monteiro & J.Guedes 2715, 29 Jun 1979, Brazil: Amazonas: Transamazon Highway, 53 km W of Aripuaña river, Campina Region, common but not abundant in open campina of white sandy soil (INPA; IT: MO-3581307, US-3076496).

Illustrations (Journals): *Novon* (5:147, Fig.1 (1995)).

Derivation (Clifford & Bostock 2007): L. Possessive plural of the Portuguese *campina* treated as a feminine noun. Of the campina (grasslands) of Amazonas, Brazil.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short, knotty. Butt sheaths pubescent. Culms erect or geniculately ascending, 40–75 cm long, 6–8 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaves cauline. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath auricles erect, 0.5–1.5 mm long. Ligule an eciliate membrane, 0.2–0.3 mm long. Leaf-blade base cordate. Leaf-blades lanceolate, 4–9.9 cm long, 9–19 mm wide. Leaf-blade venation distinct. Leaf-blade surface glabrous. Leaf-blade margins scabrous, ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 5–25, borne along a central axis, unilateral, 1.5–6.5 cm long. Central inflorescence axis 9–12 cm long. Rhachis angular, 0.3–0.6 mm wide, with scattered hairs. Rhachis hairs 4–8 mm long. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.5–1 mm long, 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, dorsally compressed, plano-convex, acute, 2.3–2.9 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 0.6–0.8 length of spikelet, membranous, light brown, without keels, 3 -veined. Upper glume surface pubescent. Upper glume margins ciliate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, light brown, 3 -veined, glabrous, ciliate on margins. Fertile lemma elliptic, 2.3–2.9 mm long, indurate, pallid, without keel, 5 -veined, more than 3-veined. Lemma surface striate, with distinct germination flap. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2–2.2 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Paspalum campylostachyum (Hack.) S. Denham. *Ann. Missouri Bot. Gard.* 92(4): 489 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya campylostachya* (Hack.) Chase, *Proc. Biol. Soc. Washington*, xxiv. 115 (1911).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (510, Fig 114 as *Thrasya*), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (566, Fig 213 as *Thrasya*).

Derivation (Clifford & Bostock 2007): Gk *kampylos*, curve; *stachys*, spike as of an ear of wheat. Racemes curved.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending or decumbent, 50–90 cm long. Culm-nodes bearded. Leaf-sheaths keeled, glabrous on surface to pilose, with simple hairs or tubercle-based hairs, outer margin glabrous or hairy. Ligule an eciliate membrane, 0.8 mm long. Leaf-blades 6–20 cm long, 3–10 mm wide. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade margins glabrous or ciliate.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous or pilose above. Racemes 1, single, arcuate, unilateral, 4–10 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 2 mm wide, glabrous on surface, glabrous on margins or ciliate on margins, terminating in a barren extension,

extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, 2.7–3 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.3 mm long, 0.25–0.5 length of spikelet, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 0.66 length of spikelet, chartaceous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, coriaceous, 5 -veined, without grooves or sulcate, acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 2.5 mm long, coriaceous, without keel. Lemma surface papillose or striate. Lemma margins involute, eciliate or ciliate. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

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

Country /Province /State. Mexico. Central Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Venezuela. Bolivia, Colombia.

Puebla. Oaxaca. Chiapas, Tabasco.

Paspalum canarae (Steud.) Veldkamp. *Blumea*, 21 (1): 72 (1973).

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

Basionym or Replaced Name: *Panicum canarae* Steud., *Syn. Pl. Glumac* 1: 58 (1853). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: *Paspalum costatum* Hochst.", "Provincia Canara Ind. or.", *Hochst. Hrbr. Hohenack. nr. 635*.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): From Canara, a region in Karnataka State, India.

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

Habit, Vegetative Morphology. Annual. Culms decumbent or prostrate, 10–40 cm long. Culm-nodes bearded. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades elliptic, 1–5 cm long, 2–10 mm wide. Leaf-blade surface pilose, densely hairy, with tubercle-based hairs. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–15, digitate, spreading, unilateral, 0.5–2 cm long. Rhachis narrowly winged, with sharp-edged midrib, 0.5 mm wide, tuberculate on margins, ciliate on margins. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5–1 mm long, setose.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or orbicular, dorsally compressed, plano-convex, obtuse, 1–1.25 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, chartaceous, without keels, 3–5 -veined. Upper glume margins tuberculate, eciliate or ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, chartaceous, 5 -veined, eciliate on margins or ciliate on margins, acute. Fertile lemma ovate or orbicular, gibbous, 1–1.25 mm long, indurate, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.3–0.5 mm long.

N = 9 (2 refs TROPICOS).

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. Assam. Thailand.

TDWG4. Meghalaya, Nagaland. Kerala. Maharashtra, Rajasthan, Tamilnadu.

Paspalum candidum (Flugge) Kunth. *Mem. Mus. Par.* ii. 68; *H. B. & K. Nov. Gen. et Sp.* i. 87. (1815).

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 Ecuador. **Basionym or Replaced Name:** *Reimaria candida* Humb. & Bonpl. ex Flügge, *Gram. Monogr., Paspalum* 214 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Humboldt & Bonpland s.n.*, Ecuador: Pichincha: prope Puanbo [Puembo] in America meridionali (B-W!; IT: BM, P!, US-2942124 (fragm. ex B-W), US-2942124 (fragm. ex P)). Typification discussed by Chase, *Contr. U.S. Natl. Herb.* 28: 36 (1929).

Recent Synonyms: *Paspalum scabrum* Scribn., *Bull. Div. Agrostol., U.S.D.A.* 4: 36, t. 3 (1897)

Illustrations (Books): S.A.Renouze, *Gramineas de Bolivia* (1998) (462, Fig 100), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (405, Fig 146).

Illustrations (Journals): *Ruizia* (13:352, Fig 441-n (1993) & Fig 45a-d(1993) as *P. lineispatha*).

Derivation (Clifford & Bostock 2007): L. glossy white. Spikelets white.

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

Habit, Vegetative Morphology. Annual. Culms decumbent or rambling, 50–100 cm long, 1–2 mm diam., rooting from lower nodes. Culm-internodes thin-walled, smooth, distally glabrous. Culm-nodes brown, glabrous or pubescent. Lateral branches lacking. Leaf-sheaths smooth, glabrous on surface, outer margin glabrous or hairy. Ligule a ciliolate membrane, 1–2.8 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 4–10 cm long, 8–21 mm wide, flaccid. Leaf-blade surface glabrous or pubescent. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Peduncle 2–5 cm long. Racemes 6–23, borne along a central axis, ascending or drooping, unilateral, 1–3 cm long. Central inflorescence axis 7–11 cm long, unspecialized or flattened, glabrous or puberulous. Rhachis deciduous from axis, broadly winged, membranous, 2 mm wide, terminating in a barren extension, extension flattened. Spikelet packing abaxial, irregular, 1 -rowed or 2 -rowed. Raceme-bases brief, pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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 elliptic or ovate, dorsally compressed, obtuse, 2.1–2.4 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, obscurely veined. Fertile lemma elliptic or ovate, 2–2.3 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.1–1.5 mm long, yellow. Caryopsis with adherent pericarp.

$2n = 60$ (1 ref TROPICOS).

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

Country /Province/State. **Mexico.** Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Southern South America.** Costa Rica, El Salvador, Honduras, Panama, Venezuela. Bolivia, Colombia, Peru. Argentina Northwest, Chile Central.

TDWG4. Jujuy, Salta. Valparaiso. Puebla, Morelos. Hidalgo. Veracruz. Jalisco, Michoacan, Oaxaca. Chiapas, Tabasco.

Paspalum capillifolium Nash. *N. Amer. Fl.* xvii. 181 (1912).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *N.L. Britton & P. Wilson 6116*, 29–31 Mar 1910, Cuba: Santa Clara (NY-71064, IT: US-2942170 (fragm.)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (222, Fig. 168).

Derivation (Clifford & Bostock 2007): L. capillis, a hair; folium, leaf. Leaf-blades thread-like.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, slender, 10–35 cm long, 1 -noded. Culm-nodes glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades curled, filiform, conduplicate, 3–15 cm long, 0.3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 2–4 cm long. Rhachis wingless, angular, scaberulous on margins. Spikelet packing abaxial. Spikelets appressed, 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, dorsally compressed, plano-convex, subacute, 1.7 mm long, 0.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 1.5 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Paspalum carajasense S. Denham. *Ann. Missouri Bot. Gard.* 92(4): 491 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya longiligulata*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya longiligulata*).

Basionym or Replaced Name: *Thrasya longiligulata* M.N.C. Bastos & A.G. Burman, *Bol. Mus. Paraense Emilio Goeldi, Bot.*, 4(2): 236 (1988).

Illustrations (Books): No illustration found (BKS).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 30–60 cm long, without nodal roots or rooting from lower nodes. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths mostly shorter than adjacent culm internode, keeled. Ligule an eciliate membrane, 1.5–2 mm long, erose. Leaf-blades 8.5–18 cm long, 2.5–5.5 mm wide. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, arcuate, unilateral, 2.4–6 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 2 mm wide, glabrous on surface, ciliate on margins, terminating in a barren extension, extension flattened. Rhachis hairs 0.5 mm long. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly, 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 elliptic, dorsally compressed, acute, 2–2.5 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.1 mm long, 0.05 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 0.9 length of spikelet, chartaceous, without keels, 5 -veined. Upper glume surface asperulous. Upper glume apex dentate, 2 -fid.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 1 length of spikelet, chartaceous, sulcate and readily splitting into two halves, glabrous, dentate, 2 -fid. Palea of lower sterile floret becoming indurate on flanks at maturity, 1 length of lemma. Fertile lemma elliptic, 1.5 mm long, coriaceous, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acute, without ornament. Palea coriaceous.

Flower and Fruit. Caryopsis ellipsoid. Embryo 0.4–0.5 length of caryopsis. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Paspalum carinatum Fluegge. *Gram. Monog.* 65. (1810).

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: *F.W.H.A. von Humboldt & A.J.A. Bonpland s.n.*, no date, Colombia: Cauca (B-W; IT: BM, SI (photo), US-2942176 (fragm. ex BM)).

Recent Synonyms: *Paspalum spissum* Swallen, *Phytologia* 14: 358 (1967).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (214, Fig. 79), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (229, Fig. 174), L.B. Smith, D.C. Wasshausen, R.M. Klein

Flora Illustrada Catarinensis Gramineas (1981–1982) (918, Fig 184), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (469, Fig. 83).

Derivation (Clifford & Bostock 2007): *L. carina*, keel; -atus, possessing. Leaf-sheaths keeled.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 45–70 cm long. Leaf-sheaths striately veined, pilose, with tubercle-based hairs. Ligule an eciliate membrane or a ciliolate membrane, 0.5–1 mm long. Leaf-blades involute, 6–11 cm long, 1–2 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Peduncle 10–15 cm long. Racemes 1, single, unilateral, 5–12.5 cm long. Rhachis narrowly winged, 2–2.3 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 3.8–5 mm long, falling entire. Rhachilla internodes elongated below proximal fertile floret.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous, hairy below. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, eciliate on midvein or ciliolate on midvein (at base), obtuse. Fertile lemma elliptic, 3–3.7 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex without ornament or pubescent. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Roraima, Para, Amapa, Mato Grosso, Goias, Bahia, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Paspalum centrale Chase. *Journ. Wash. Acad. Sc.* xvii. 145. (1927).

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 El Salvador. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 8789, 13 Nov 1911, El Salvador: La Unión (US-950876).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (409, Fig 148).

Derivation (Clifford & Bostock 2007): *L. centrum*, centre of a circle; -ale, pertaining to. From Central America.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 30–85 cm long, 1–2.5 mm diam. Culm-internodes thick-walled, distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths loose, narrower than blade at the collar, keeled, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 3–4 mm long, brown. Leaf-blades 9–24 cm long, 3–11 mm wide. Leaf-blade midrib keeled beneath. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 1–9, borne along a central axis, unilateral, 2–6 cm long. Central inflorescence axis 1.5–8 cm long. Rhachis narrowly winged, 1–1.3 mm wide. Spikelet packing abaxial, 2 -rowed. Raceme-bases brief, 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 obovate, dorsally compressed, obtuse, 2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 4–5 -veined. Upper glume primary vein absent or obscure. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, membranous, 4–5 -veined, without midvein or with obscure midvein, with unevenly spaced veins (near margin), obtuse. Fertile lemma orbicular, 1.8–2.2 mm long, indurate, dark brown, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.8–0.9 mm long, yellow. Caryopsis with adherent pericarp, ellipsoid, 1.8 mm long.

$2n = 60$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Gulf (Mexico), Southeast Mexico. **Mesoamerica, Brazil.** Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Brazil North. Veracruz. Chiapas.

Paspalum ceresia (Kuntze) Chase. *Contrib. U. S. Nat. Herb.* xxiv. 153 (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 Peru. **Basionym or Replaced Name:** *Paspalum membranaceum* Lam.. *Tabl. Encycl.* 1: 177 (1791)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Coll. Ukn. s.n.*, no date, Peru: eastern Peru (P-LA; IT: P, SI (photo), US-2855815 (fragm. ex P)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (452, Fig 98).

Illustrations (Journals): *Ruizia* (13:352, Fig 44a-d (1993)).

Derivation (Clifford & Bostock 2007): L. Ceres, Goddess of the harvest; forma, appearance. The racemes somewhat resemble those of wheat.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths villous. Culms decumbent, 30–60 cm long. Ligule an eciliate membrane. Leaf-blades 5–15 cm long, 4–10 mm wide, glaucous. Leaf-blade surface pilose, hairy adaxially. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 1–4, borne along a central axis, arcuate, unilateral, 4–6 cm long. Rhachis broadly winged, membranous, 4–8 mm wide, light-coloured (yellow & purple), terminating in a barren extension, extension flattened. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 3.2–3.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume surface villous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, pubescent, acute. Fertile lemma elliptic, 3.2–3.5 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia, Ecuador, Peru. Brazil West Central, Brazil Northeast. Argentina Northwest, Paraguay.

TDWG4. Mato Grosso, Goias, Maranhao, Piaui. Jujuy, Salta, Tucuman.

Paspalum chacoense Parodi. *Physis*, xi. 132 (1932).

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: HT: *L.R. Parodi 8476*, 26 Jan 1928, Argentina: Formosa, Saladas (BAA; IT: K, US-1385802, W).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Chaco Province, Argentina.

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly. Basal innovations extravaginal. Culms 50–60 cm long, 3–4 mm diam., 6–8 -noded. Culm-nodes glabrous. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 2–3 mm long, pubescent on abaxial surface, obtuse. Leaf-blades flat or conduplicate, 10–25 cm long, 4–6 mm wide. Leaf-blade surface glabrous. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Axillary inflorescences different from terminal (1 raceme). Racemes (1–)3, digitate, unilateral, 6–10 cm long. Central inflorescence axis 2–4 cm long. Rhachis angular, 0.6–0.8 mm wide. Spikelet packing 3 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, subequal, 0.5 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 elliptic or obovate, dorsally compressed, plano-convex, 2.2–2.5 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, 1-keeled (slightly), 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic or ovate, 2.2–2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.8 mm long, purple. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central. Paraguay.

TDWG4. Formosa.

Paspalum chaffanjonii Maury. *Morot, Journ. de Bot.* iii. 159 fig. 5. (1889).

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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *J. Chaffanjon 291*, no date, Venezuela: Bolívar, Boca del Pao (US-2942173 (fragm. ex P & photo)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Jean Chaffanjon (1854–1913).

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

Habit, Vegetative Morphology. Perennial. Rhizomes short, scaly, hairy. Culms 70–80 cm long. Leaf-sheaths pilose, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blades 20–25 cm long, 5–6 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, paired or digitate, unilateral, 4–8 cm long. Central inflorescence axis 0–1 cm long. Rhachis angular. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 2.5–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, ciliate on margins, acute. Fertile lemma ovate, 2–2.5 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum chaseanum Parodi. *Physis*, xi. 129 (1932).

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: HT: *L.R. Parodi 8391*, 23 Jan 1928, Argentina: Formosa: Las Lomitas, km 297 FC de Formosa, 24°40'S, 60°30'W (BAA; IT: K, SI, US-1385806).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -anum, indicating connection. In honor of Mary Agnes Merrill Chase (1869–1963) United States agrostologist.

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

Habit, Vegetative Morphology. Perennial. Basal innovations intravaginal. Culms erect, 70–150 cm long, 5–6 mm diam., 5–6 -noded. Culm-nodes brown, glabrous. Leaf-sheaths longer than adjacent culm internode, hispid. Ligule an eciliate membrane, 2 mm long. Leaf-blades 15–35 cm long, 8–10 mm wide. Leaf-blade surface hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 6–25, borne along a central axis, unilateral, 3–13 cm long. Central inflorescence axis 10–15 cm long. Rhachis angular, glabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, fused to each other, united below, clavate, subequal, 1 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2–2.5 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, dark green, without keels, 3 -veined. Upper glume surface papillose, pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, dark green, 3 -veined, papillose, pubescent, acute. Fertile lemma elliptic, 2–2.5 mm long, indurate, dark brown, shiny, without keel. Lemma surface punctate. Lemma margins involute. Palea involute, indurate.

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

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Paraguay. Formosa.

Paspalum cinerascens (Doell) A.G.Burman & M.N.C.Bastos. *Bol. Mus. Paraense Emilio Goeldi, Bot.*, 4(2): 241 (1988).

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 cinerascens* Döll, *Fl. Bras.* 2(2): 189 (1877). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *P. Lund s.n.*, no date, Brazil: Minas Gerais (KR; ILT: US-2942145 (fragm. ex KR)). LT designated (as holotype) by Judziewicz, *Fl. Guianas, Ser. A, Phanerogams*, 187. Poaceae: 631 (1990).

Recent Synonyms: *Thrasya cinerascens* (Doell.) Judz., *Fl. Guianas, Ser. A*, 8(187): 631: (1990).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92): 492: Fig.13 (2005)).

Derivation (Clifford & Bostock 2007): *L. cinerascens*, become ashen. Leaf-blades glaucous.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 100–300 cm long, 2–3 mm diam. Culm-nodes brown, pubescent. Leaf-sheaths hirsute or hispid. Ligule an eciliate membrane, 2 mm long. Leaf-blades 20–30 cm long, 12 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Peduncle 5–40 cm long, glabrous. Racemes 1–2(–5), single or paired or digitate, unilateral, 15–25 cm long. Rhachis narrowly winged, 1–1.7 mm wide, with scattered hairs or glabrous on surface, terminating in a barren extension, extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly, oblong, 0.5–1 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 elliptic or ovate, dorsally compressed, plano-convex, 3.3–4.2 mm long, 1.8–2.5 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 1.5–2.5 mm long (on short pedicel) or 0.7–1.2 mm long (on long pedicel), 0.2–0.6 length of spikelet, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume lateral veins with cross-veins, excurrent. Upper glume apex erose (splitting along veins at maturity).

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, coriaceous, 5 -veined, with cross-veins, acute. Palea of lower sterile floret 1 length of lemma. Fertile lemma ovate, 3–4 mm long, coriaceous, pallid and purple, tipped with last colour, without keel. Lemma surface granulose. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil, and Southern South America. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South.
TDWG4.

Paspalum circulare Nash. *Man. Fl. N. States* 73 (1901).

Regarded by K as a synonym (*P. laeve*).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.V. Nash s.n.*, 18 Aug 1889, USA: New Jersey: Bergen Co. (NY-6619; IT: US-2942144 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. circulus*, circle; -are, pertaining to. Spikelets circular in outline.

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

Distribution (TDWG). Continent. North America.

Country /Province /State. Northeast USA. New Jersey.

Paspalum clandestinum Swallen. *Phytologia*, xiv. 386 (1967).

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: *J.R. Swallen 4064*, 20–25 Mar 1934, Brazil: Maranhão, Carolina to San Antonio de Balsas (US-1613861).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. hidden*. The inflorescence is enclosed or partially enclosed in the upper leaf-sheath.

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

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 13–28 cm long. Culm-internodes distally glabrous. Leaf-sheaths longer than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule an eciliate membrane. Leaf-blades erect or ascending, 3–7 cm long, 2–4 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes, subtended by an inflated leaf-sheath, enclosed. Racemes 1, single, arcuate, unilateral, 10 cm long. Rhachis 1 mm wide, scaberulous on margins. Spikelet packing abaxial. 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, plano-convex, acute, 3 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.15 length of spikelet, membranous. Upper glume elliptic, 1 length of spikelet, membranous, mid-green or light brown (spotted), without keels, 3 -veined. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, mid-green or light brown (spotted), 3 -veined, with unevenly spaced veins (near margins), pubescent. Fertile lemma elliptic, 2.5 mm long, indurate, pallid, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Paspalum clavuliferum Wright. *Souv. Fl. Cub.* 195. (1871).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Wright 3444*, Cuba (GH; IT: B, NY-71066, NY-71067, US-2942143).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (223, Fig. 170), S.A.Rennoise, *The Grasses of Bahia*, 1984 (230, Fig. 85), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (410, Fig 149).

Derivation (Clifford & Bostock 2007): *L. clava*, club; -ula, diminutive; fero, bear. The glumes and sterile lemma bear capitellate hairs.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 10–30 cm long, 0.5–1 mm diam. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaves mostly basal. Leaf-sheaths pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 0.7–1 mm long, brown. Leaf-blades 3–9 cm long, 1.5–3 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1–2, single or paired, arcuate, unilateral, 1–4 cm long. Rhachis wingless, angular, 0.4–0.5 mm wide. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.2–0.5 mm long, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, 1.2–1.4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, with capitate hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, eciliate on margins or ciliate on margins (capitate hairs). Fertile lemma obovate, 1.2–1.4 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.2–0.3 mm long, brown. Caryopsis with adherent pericarp, obovoid, 0.8 mm long.

$2n = 20$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Puerto Rico. Guyana, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast.

TDWG4. Goiás, Bahia, Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe. Colima, Guerrero, Jalisco, Michoacán, Nayarit, Oaxaca. Chiapas, Yucatán.

Paspalum clipeum G.H. Rua, Valls, Graciano-Ribeiro R.C. Oliveira. *Syst. Bot.* 33(2): 273, f. 8, 9a,b (2008).

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Brazil: Goiás: Mun. Simolândia, pouca ao norted da estrada Simolândia-Jaciara, entrando a oested da ponte sobre o corego Salobro, 14°29'22.7"S 46°29'42.3"W, 500m, 28 May 2006, J.F.M. Valls, G.H. Rua & A. Custodio 15204 (HT: CEN; IT: BAA, K, L, MO, RB, SI, US)

Illustrations (Journals): *Systematic Botany* (33:273, Fig.8 (2008)).

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

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 3–11 cm long, 0.5–1.1 mm diam., 3–4 -noded. Culm-internodes solid, distally glabrous. Culm-nodes purple, glabrous. Lateral branches ample. Leaf-sheaths 2–6 cm long, keeled, striately veined, glabrous on surface or hirsute. Ligule an eciliate membrane, 0.7–0.9 mm long, truncate or obtuse. Leaf-blades lanceolate, 3–5 cm long, 5 mm wide. Leaf-blade surface glabrous or hirsute. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, embraced at base by subtending leaf. Peduncle 1.5–4 cm long, glabrous. Racemes 1–2, single or paired, erect, unilateral, 1–2 cm long. Central inflorescence axis 0.8–1 cm long. Rhachis narrowly winged, angular, 0.8–0.9 mm wide. Spikelet packing crowded. Raceme-bases brief, pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 1–1.2 mm long, glabrous or puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular or obovate, dorsally compressed, 2.4–2.5 mm long, 1.8–2.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular or obovate, 2.4–2.5 mm long, 1 length of spikelet, membranous, light green, without keels, 5 -veined. Upper glume primary vein conspicuous. Upper glume surface puberulous, hairy in the middle. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma orbicular or obovate,

2.4 mm long, indurate, yellow, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins involute. Palea embraced by lemma, involute, indurate.

Flower and Fruit. Lodicules 2. Anthers 3, 0.8 mm long, yellow. Caryopsis with adherent pericarp, obovoid, dorsally compressed, plano-convex, 1.6 mm long, pallid. Hilum linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

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

Paspalum commune Lillo. *Fl. Prov. Tucuman* :23 (1916).

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: LT: *M. Lillo* 4649, 25 Dec 1905, Argentina: Tucumán (LIL; ILT: US-2855311 (fragm.)). LT designated by Parodi, *Physis* (Buenos Aires) 9: 24. 1928.

Recent Synonyms: *Paspalum collinum* Chase, *Contr. U.S. Natl. Herb.* 24 (8): 451 (1927).

Illustrations (Books): E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (481, Fig. 173).

Derivation (Clifford & Bostock 2007): L. ordinary. Commonly encountered species.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Basal innovations extravaginal. Culms 150–200 cm long, 5–7 -noded. Culm-nodes pubescent. Leaf-sheaths glabrous on surface or puberulous. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades 35–70 cm long, 15–20 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 6–10, borne along a central axis, unilateral, 5–15 cm long. Central inflorescence axis 10–15 cm long. Rhachis angular, glabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, obtuse, 1.8–2.3 mm long, 1.5–2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, dark brown, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, dark brown, 3 -veined, puberulous, obtuse. Fertile lemma ovate, 1.8–2.3 mm long, indurate, dark brown, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia. Brazil Southeast. Argentina Northwest.

TDWG4. Jujuy, Salta, Santiago del Estero, Tucuman.

Paspalum compressum Raf. *Fl. Ludov.* 15 (1817).

Illustrations (Books): No illustration found (BKS).

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

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Colombia. Uruguay.

Paspalum compressifolium Swallen. *Phytologia*, xiv. 381 (1967).

Accepted by: 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: *J.R. Swallen* 7790, 19 Dec 1945, Brazil: Rio Grande do Sul: Passo Fundo, Fazenda da Brigada, margin of banhado, wet ground,, sheaths compressed, foliage light bluish green, culms ascending at base, blades erect, rather stiff (US-1961358; IT: MO-0490984).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. comprimio, squeeze together; folium, leaf. Leaf-sheaths strongly compressed.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 38–57 cm long. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2 mm long. Leaf-blades conduplicate, 17–30 cm long, 2 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, borne along a central axis, unilateral, 3–6.5 cm long. Rhachis wingless, angular, 0.5 mm wide, glabrous on surface. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, obtuse, 2.8 mm long, 1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, wrinkled, glabrous. Fertile lemma ovate, 2.8 mm long, 1.8 mm wide, indurate, dark brown, without keel. Lemma surface smooth. Lemma margins involute, ciliate, hairy above. Palea involute, indurate.

Flower and Fruit. $N = 10$ (1 ref TROPICOS). $2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

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

TDWG4. Misiones.

Paspalum conduplicatum T.S. do Canto-Dorow, J.F.M. Valls & H.M. Longhi-Wa. *Bradea*, 6(40): 333 (1995).

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: *Barreto s.n.*, 17 Nov 1992, Brazil. Rio Grande do Sul: São Gabriel, Granja Sao Jose (ICN-96705; IT: CEN, ICN-103626, SMDDB).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. conduplico*, fold. Leaf-sheaths strongly keeled.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Basal innovations intravaginal. Culms prostrate, 9–40 cm long, 2–3 -noded. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Leaves mostly basal. Leaf-sheaths 3.5–10.3 cm long, striately veined, pubescent. Leaf-sheath oral hairs ciliate, 2.5 mm long. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades ascending, linear or lanceolate, 1.8–11 cm long, 1.5–4 mm wide. Leaf-blade venation indistinct. Leaf-blade surface scabrous, rough abaxially. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes, without bracts or bracteate at branch bases. Racemes 2(–3), paired, ascending, unilateral, 2.9–6.2 cm long. Rhachis wingless, angular, 1 mm wide, glabrous on surface, scaberulous on margins. Spikelet packing abaxial, regular, 2 -rowed. Raceme-bases pubescent. 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 lanceolate or ovate, dorsally compressed, plano-convex, obtuse, 2.3–2.9 mm long, 1.9–2.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 2.3–2.9 mm long, 1 length of spikelet, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 2.1–2.8 mm long, 1 length of spikelet, 3 -veined. Fertile lemma obovate, gibbous, 1.9–2.5 mm long, 1.5–1.9 mm wide, indurate, dull, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, 1.7–2.3 mm long, indurate.

Flower and Fruit. Lodicules 2, obtuse. Anthers 3, 0.9 mm long, red. Caryopsis with adherent pericarp, ovoid, 1.7–2.3 mm long. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil South.

Paspalum conjugatum Berg. *Act. Helv.* vii. 129. t. 8. (1772).

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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Surinam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Rolander in Herb. Bergius* 36, Surinam (SBT). LT designated by Koning & Sosef, *Blumea* 30: 290, 293 (1985).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (395, Fig. 149), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (358, Fig. 140), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (578), C-C Hsu, *Taiwan Grasses* (1975) (582, Fig. 1439), H.J.Noltie, *The Grasses of Bhutan* (2000) (713, Fig. 42), H.B.Gilliland, *Grasses of Malaya* (1971) (181, Fig. 37), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (105, Fig. 106), E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (138, Pl. 54), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (327), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1572, Pl. 233), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (574), F.W.Gould, *The Grasses of Texas* (1975) (507, Fig. 266 & 265), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (227, Fig. 177), S.A.Rennoize, *Gramineas de Bolivia* (1998) (477, Fig 104), S.A.Rennoize, *The Grasses of Bahia*, 1984 (210, Fig. 78), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (918, Fig. 184 & 936, Fig. 189), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (384, Fig. 160 LAM. 6), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (410, Fig. 149), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (61, Fig. 33), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 734), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:95(1980)).

Illustrations (Journals): *Ruizia* (13:356, Fig 45e-f (1993)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005);, H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);.

Derivation (Clifford & Bostock 2007): L. conjugo, yoke together. Inflorescence branches paired.

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

Habit, Vegetative Morphology. Perennial. Stolons present, with alternating elongated and bunched internodes. Culms 30–60 cm long. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades linear or lanceolate, 4–20 cm long, 5–13 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 5–17 cm long. Rhachis narrowly winged, angular, 0.5 mm wide. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular, dorsally compressed, plano-convex, obtuse, 1.5–1.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, yellow, without keels, 3 -veined. Upper glume margins ciliate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 7 -veined, obtuse. Fertile lemma orbicular, gibbous, 1.5–1.7 mm long, indurate, pallid, without keel, 3 -veined, 0–3 -veined. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. $N = 10$ (2 ref TROPICOS), or 20 (1 ref TROPICOS). $2n = 40$ (6 refs TROPICOS).

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

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Middle Atlantic ocean, Western Indian ocean. Benin, Ghana, Liberia, Nigeria, Sierra Leone. Cabinda, Cameroon, Gabon, Annobon, Principe & Sao Tome, Bioko, Rwanda, DRC. Ethiopia (inc. Eritrea). Tanzania, Uganda. Angola, Malawi. Ascension. Mauritius (*), Madagascar (*), Seychelles. **China, Eastern Asia.** China South Central, Hainan, China Southeast. Kazan-retto, Nansei-Shoto, Ogosawara-shoto, Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Bangladesh, Eastern Himalaya, India, Sri Lanka. Andaman Is, Cambodia, Laos, Myanmar, Thailand, Vietnam. Borneo, Java, Lesser Sunda Is, Malaya, Singapore, Moluccas, Philippines, Sulawesi, Sumatra, Christmas I. New Guinea West

Papua (Irian Jaya). New Guinea (*), Solomon Is (*). **Australia, New Zealand.** Western Australia (*), Northern Territory (*), Queensland (*), New South Wales (*). Kermadec Is, New Zealand North I. **Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific.** Fiji (*), Niue (*), New Caledonia (*), Samoa (*), Tonga (*), Vanuatu (*), Wallis-Futuna Is (*). Cook Is (*), Easter Is (*), Marquesas (*), Pitcairn Is (*), Society Is (*), Tubuai Is (*). Marianas (*), Marshall Is (*). Hawaii (*). **South-central USA, Southeastern USA, Mexico.** Texas. Alabama, Florida, Louisiana, Mississippi. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Bahamas, Bermuda, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Galapagos, Peru. Brazil Northeast, Brazil Southeast, Brazil North. Argentina Northeast, Argentina Northwest.

TDWG4. Fujian, Guangxi, Hong Kong. Yunnan. Darjeeling, Bhutan, Sikkim. Assam, Meghalaya. Kerala. Tamilnadu, West Bengal. Kimberley. Darwin & Gulf. North, Central, South East. Coast. Jujuy, Salta, Santiago del Estero, Tucuman. Chaco, Corrientes, Entre Rios, Formosa, Misiones, Santa Fe. Mexico State, Puebla, Morelos. Coahuila, Durango, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Sinaloa. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum conspersum Schrad. ex Schult. *Mant.* ii. 174 (1824).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Princeps Sereniss. Maximilian Neowidens*, Brazil (B; IT: US-2942135 (fragm. ex B)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (583), S.A.Renvoize, *The Grasses of Bahia*, 1984 (216, Fig. 80), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (983, Fig 194).

Derivation (Clifford & Bostock 2007): *L. conspergo*, scatter. Glumes in part hairy and in part glabrous.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths herbaceous. Culms robust, 100–200 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths striately veined, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blade base broadly rounded. Leaf-blades 30–75 cm long, 10–25 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 6–12, borne along a central axis, unilateral, 7–15 cm long. Central inflorescence axis 8–18 cm long. Rhachis wingless, angular, 0.7–1.2 mm wide, scaberulous on margins, glabrous on margins. Spikelets in pairs. 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, dorsally compressed, plano-convex, subacute, 2.7–3 mm long, 1.6–1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, light brown to purple, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, light brown or purple, 5 -veined, concave across back, glabrous or pubescent, acute. Fertile lemma elliptic, 2.5–2.7 mm long, indurate, dark brown, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$N = 30$ (1 ref TROPICOS). $2n = 40$ (1 ref TROPICOS), or 60 (2 refs TROPICOS).

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

Country /Province /State. Papuasia. New Guinea. **South-central USA, Southeastern USA, Mexico.** Texas. Florida, Georgia. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Northern South America, Western South America, Brazil, Southern South America.** Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay.

TDWG4. Goias, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Chaco, Corrientes, Formosa, Misiones. Mexico State, Puebla, Morelos. Tamaulipas. Veracruz. Jalisco, Michoacan. Chiapas, Quintana Roo.

Paspalum convexum Fluegge. *Gram. Monog.* 175. (1810).

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), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.W.H.A. von Humboldt, A.J.A. Bonpland s.n.*, no date, Mexico: Michoacán: Jorullo (B-W; IT: BM, P, US-2942133 (fragm. ex B, P)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (583), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (238, Fig. 191), J.A.Steyermark et al, *Flora of the Venezuelan Guayana Vol. 8* (2004) (230, Fig. 176), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (414, Fig. 151), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (as *P. ancylocarpum*).

Illustrations (Journals): *Ruizia* (13:370 Fig 48i-k (1993)).

Derivation (Clifford & Bostock 2007): *L. convex.* Fertile lemma markedly convex.

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

Habit, Vegetative Morphology. Annual, mat forming or caespitose. Culms decumbent, 10–60 cm long, 1–1.5 mm diam. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths keeled, glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1–2 mm long, brown. Leaf-blade base broadly rounded. Leaf-blades 5–18 cm long, 5–9 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface glabrous to pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 1–5, borne along a central axis, unilateral, 3–5 cm long. Central inflorescence axis 0–3 cm long. Rhachis narrowly winged, 1 mm wide. Spikelet packing 4-rowed. Raceme-bases brief, pilose. Spikelets in pairs. 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 orbicular, dorsally compressed, 1.8–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 5 -veined, pubescent, obtuse. Fertile lemma orbicular, 1.8–2.3 mm long, indurate, dark brown, shiny, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.8–1.1 mm long, purple. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS), or 32 (1 ref TROPICOS), or 40 (1 ref TROPICOS).

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

Country /Province /State. **South-central USA, Southeastern USA, Mexico.** Texas. Louisiana, Mississippi. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast.

TDWG4. Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso, Goias, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo. Distrito Federal, Mexico State, Puebla, Morelos. Aguascalientes, Chihuahua, Durango, Guanajuato, Queretaro, Zacatecas. Veracruz. Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas, Tabasco.

Paspalum corcovadense Raddi. *Agrost. Bras.* 27 (1823).

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: LT: *G. Raddi s.n.*, no date, Brazil: Rio de Janeiro: Monte Corcovado, Rio de Janeiro (PI (sheet with entire plant and a second flowering culm lacking its base); IT: FI, PI, US-2942132 (fragm. ex FI, PI & photo)). LT designated (as holotype) by Zuloaga & Morrone, *Contr. U.S. Natl. Herb.* 46: 459 (2003) but without designating a specific sheet; a specific sheet designated by Baldini & Longhi-Wagner, ined..

Recent Synonyms: *Paspalum umbratile* Chase, *Contr. U.S. Natl. Herb.* 28: 132 (1929).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (232, Fig. 86), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1051, Fig 205).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Mt. Corcovado, Brazil.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms slender, 50–100 cm long. Culm-nodes black. Lateral branches lacking. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate, 3 mm long. Ligule an eciliate membrane, 1 mm long. Leaf-blades 15–22 cm long, 10–15 mm wide. Leaf-blade surface glabrous or puberulous, hairy abaxially.

Inflorescence. Inflorescence composed of racemes. Peduncle 10–25 cm long. Racemes 3, borne along a central axis, unilateral, 7–10 cm long. Central inflorescence axis 3–6 cm long. Rhachis 0.3–0.5 mm wide. Spikelet packing lax, 2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 1.5–2.2 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, subacute, 2.1–2.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 1.7–2 mm long, 0.8–0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume hairs tawny.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, coriaceous (shiny), 3 -veined, scaberulous, eciliate on margins or ciliolate on margins. Fertile lemma elliptic, 2.1–2.3 mm long, indurate, yellow, without keel. Lemma surface granulose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Northeast Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Northern South America, Western South America, Brazil. Belize, Honduras. Guyana, Venezuela. Peru. Brazil Northeast, Brazil Southeast, Brazil South.

TDWG4. Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Tamaulipas. Oaxaca. Chiapas, Yucatan.

Paspalum cordaense Swallen. *Phytologia*, xiv. 374 (1967).

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>: *vide* TROPICOS and Kew Synonymy Database: Brazil: Maranhão: collected on roadside through chapada, Barra do Corda to Grajahú, 1–5 Mar 1934, *J.R. Swallen 3618* (HT: US-2238395).

Illustrations (Books): No illustration found (BKS).

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

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

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 25–50 cm long. Culm-internodes distally glabrous. Lateral branches ample, arising from lower culm. Leaf-sheaths mostly shorter than adjacent culm internode, hispid, with tubercle-based hairs. Ligule an eciliate membrane, 3 mm long. Leaf-blades 8–25 cm long, 4–6 mm wide. Leaf-blade surface pilose, sparsely hairy or moderately hairy or densely hairy, with tubercle-based hairs. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3.5–8 cm long. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.5 mm long or 1–1.3 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, 3–3.1 mm long, 2.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, mid-green or light brown (spotted), pilose. Fertile lemma elliptic, gibbous, 3 mm long, indurate, dark brown, shiny, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum cordatum Hack. *Arkiv Bot. Stockh.* ix. No. 15, 5 (1910).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *P. Dusén* 3248, 7 Jan 1904, Brazil: Paraná: Ponto Grossa, Rio Tibagy (W; IT: G, US-2942131 (fragm. ex W)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. cordus*, heart; -ata, possessing. Bases of leaf-blades cordate.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 100 cm long, 5 -noded. Culm-nodes glabrous. Leaf-sheaths longer than adjacent culm internode, pubescent. Ligule an eciliate membrane, truncate. Leaf-blades 30–40 cm long, 4–8 mm wide, stiff. Leaf-blade midrib conspicuous. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, digitate, unilateral, 10–12 cm long. Central inflorescence axis 0.5–1 cm long. Rhachis narrowly winged, angular, 1.5 mm wide, terminating in a barren extension, extension flattened or subulate, extension 3–5 mm long. Spikelet packing abaxial, crowded, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, with cordate base, dorsally compressed, plano-convex, obtuse, 5 mm long, 3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, auriculate at base, 1 length of spikelet, membranous, without keels, winged on margins, 7 -veined. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 0.75 length of spikelet, membranous, 3 -veined, tuberculate on margins, setose on margins, obtuse. Fertile lemma oblong, 3.5–4 mm long, indurate, pallid, without keel. Lemma margins involute, ciliolate, hairy above. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.8 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province/State. Western South America, Brazil. Colombia. Brazil West Central, Brazil North, Brazil Southeast, Brazil South.

TDWG4. Sao Paulo Parana.

Paspalum coryphaeum Trin. *Gram. Panic.* 114. (1826).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *G.H. von Langsdorff*, no date, Brazil. São Paulo: Itu (LE; IT: US-2942130 (fragm. ex LE)).

Recent Synonyms: *Paspalum brunneum* Mez, *Repert. Spec. Nov. Regni Veg.* 15: 74 (1917). *Paspalum indutum* Lucas, *J. Wash. Acad. Sci.* 32(6): 162, f. 6 (1942).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (235, Fig. 186), S.A.Renouze, *The Grasses of Bahia*, 1984 (220, Fig. 81), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (231, Fig. 177), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1051, Fig. 205), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (414, Fig. 152).

Derivation (Clifford & Bostock 2007): *Gk. koryphe*, top of the head; *L. -eum*, resembling. Culms tall, freely branching from upper nodes.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths pilose. Culms erect or rambling, 65–400 cm long, 2–4 mm diam. Culm-internodes thin-walled, distally glabrous or pubescent. Lateral branches ample. Leaf-sheaths keeled, pubescent, outer margin hairy. Leaf-sheath oral hairs bearded. Ligule an eciliate membrane, 1–4.5 mm long, brown. Leaf-blade base simple or cordate. Leaf-blades 30–50 cm long, 10–13 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or puberulous. Leaf-blade margins scabrous, glabrous or tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 15–44, borne along a central axis, simply spaced or in several whorls, unilateral, 5–13 cm long. Central inflorescence axis 3–20 cm long. Rhachis wingless, angular, 0.5 mm wide. Spikelet packing 4 -rowed. Raceme-bases brief, hirsute. Spikelets in pairs. 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 obovate, dorsally compressed, acute, 2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, dark brown, without keels, 3 -veined. Upper glume surface pubescent, with tubercle-based hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, membranous, 3 -veined, glabrous or puberulous. Fertile lemma ovate, 1.8–2.3 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2–1.4 mm long, purple. Caryopsis with adherent pericarp.

$N = 10$ (1 ref TROPICOS). $2n = 20$ (1 ref TROPICOS), or 40 (1 ref TROPICOS).

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

Country /Province /State. **Southeastern USA** (*), **Mexico.** Florida (*), North Carolina (*). Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, Honduras, Panama. Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Colombia. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South.

TDWG4. Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Yucatan.

Paspalum costaricense Mez. *Fedde, Repert.* xv. 72 (1917).

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: LT: *Tonduz (Herb. inst. phys.-geogr. Cost.) 8038*, Jun 1893, Costa Rica: ad San José (B; ILT: B, G, US-471864, US-2942128 (fragm. ex B, P)). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 116 (1929). ST: *Tuerkheim 440*, Guatemala: ad Coban ST: *Seler 2707*, Guatemala: Dept. Huatenango prope Chacule in silvis ST: *Gollmer s.n.*, Venezuela: prope La Guayara ST: *Otto s.n.*, loco non indicato.

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (417, Fig 153).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms 30–75 cm long, 2–3 mm diam. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 3–5 mm long, brown. Leaf-blades filiform, 10–18 cm long, 10–30 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–7, borne along a central axis, unilateral, 4–7 cm long. Central inflorescence axis 2–6 cm long. Rhachis wingless, flattened, 0.6–1 mm wide. Spikelet packing 4 -rowed. Raceme-bases brief, hirsute. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.5–1.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, subacute, 2.4–2.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, dark brown or purple, without keels, 3–5 -veined. Upper glume surface puberulous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined, puberulous. Fertile lemma elliptic or obovate, 2.2–2.5 mm long, indurate, yellow, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.9–1 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 1.9 mm long.

$2n = 60$ (1 ref TROPICOS).

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

Country /Province /State. **Mexico.** Southwest Mexico, Southeast Mexico. **Mesoamerica.** Costa Rica. Oaxaca. Chiapas.

Paspalum costellatum Swallen. *Phytologia*, xiv. 385 (1967).

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: *J.R. Swallen 3955*, 20–25 Mar 1934, Brazil: Maranhão: Carolina to San Antonio de Balsas (US-1613883, IT: K).

Illustrations (Books): No illustration found (BKS).

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

Habit, Vegetative Morphology. Annual. Culms erect, 12–28 cm long. Culm-internodes distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, keeled, glabrous on surface. Ligule an eciliate membrane. Leaf-blades lanceolate, 3–6 cm long, 4–8 mm wide, flaccid. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, borne along a central axis, unilateral, 1–3 cm long. Central inflorescence axis 6–8 cm long. Rhachis narrowly winged, angular, 1–1.3 mm wide, scabrous on margins. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, obtuse, 1.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma oblong, 1.2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast. Maranhao, Piaui.

Paspalum crinitum Chase ex Hitchcock. *Contrib. US. Nat. Herb.* xvii. 237 (1913).

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: HT: *C.G. Pringle 3755*, 10 Jul 1891, Mexico: San Luis Potosí: Hacienda de Angostura, alkaline meadows (US-824361; IT: B, MA, MEXU, MO-5114653, MO-2977056, P, W).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (97: 18, Fig.4 (2010)).

Derivation (Clifford & Bostock 2007): L. with long hair. Hairy as of leaf-blades or awns invested in long weak hairs.

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

Habit, Vegetative Morphology. Perennial. Culms 60–100 cm long. Ligule an eciliate membrane. Leaf-blades 10–25 cm long, 4–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–11, borne along a central axis, unilateral, 6–12 cm long. Central inflorescence axis 10–30 cm long. Rhachis narrowly winged. Spikelet packing lax. Spikelets in pairs. 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, dorsally compressed, plano-convex, 2.5–2.8 mm long, 1.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume surface glabrous or pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, glabrous or pubescent. Fertile lemma elliptic, 2–2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico.

TDWG4. Puebla, Coahuila, Durango, Guanajuato, Neuvo Leon, San Luis Potosi, Zacatecas. Jalisco.

Paspalum crispatum Hack. *Fedde, Repert. Nov. Sp.* vii. 370 (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Paraguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Rojas 10789*, Apr 1908, Paraguay. Amambay: In altiplanitie et declivibus Sierra de Amambay (W; IT: B, BM, G, K, LIL, P, US-952226, US-2854127 (fragm. ex W), US-1299913).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. crispum*, curl. Hairs on the spikelet conspicuously crisped.

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

Habit, Vegetative Morphology. Annual. Culms erect, 50 cm long, 8-noded. Lateral branches lacking. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 4–8 cm long, 4–8 mm wide, stiff. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–12, borne along a central axis, unilateral, 1–4 cm long. Central inflorescence axis 9 cm long. Rhachis narrowly winged, angular. Spikelet packing irregular, 4-rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, glabrous, 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 oblong, dorsally compressed, plano-convex, obtuse, 2.5–3.8 mm long, 0.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3-veined. Upper glume surface pubescent, with tubercle-based hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3-veined, pilose, with tubercle-based hairs, obtuse. Fertile lemma oblong, 1.5 mm long, indurate, yellow, without keel, 3-veined, 0–3-veined. Lemma margins involute. Lemma apex obtuse, mucronate. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central. Paraguay. Mato Grosso.

Paspalum crispulum Swallen. *Phytologia*, xiv. 365 (1967).

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: HT: *A. Macedo 4432*, 25 Feb 1956, Brazil: Goiás: Mun. Niquelândia, Macedo (US-2208290 (photo, SI); IT: BAA).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. crispum*, curly; -ulum, tendency. Leaf-blade filiform often curved.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms slender, 23–33 cm long, 2-noded. Leaves mostly basal. Leaf-sheaths mostly shorter than adjacent culm internode, pilose. Leaf-sheath oral hairs scanty or lacking. Ligule an eciliate membrane. Leaf-blades straight or curved, filiform, 5–10 cm long, 1 mm wide. Leaf-blade surface glabrous or pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Peduncle pilose above. Racemes 2, paired, unilateral, 2(–3) cm long. Central inflorescence axis 0 cm long. Rhachis 0.4 mm wide. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.4 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, 1.9–2 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5-veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5-veined, with unevenly spaced veins. Fertile lemma elliptic, 1.9–2 mm long, indurate, pallid, dull, without keel. Lemma surface striate. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum cromyorrhizon Trin. ex Döll. *Fl. Bras.*2(2): 74 (1877).

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: OM: *Otto hb. Kunth*, Brazil: Montevideo (LE-TRIN-0438.01 (fragm. ex B & illustr.), US-929639 (fragm.)). 385. *PP. furiatum* Fluegge (Sprgl!): *P. cromyorrhizon* m.. LT: *F. Sellow s.n.*, no date, Brazil (B; ILT: US-929639 (fragm. ex B), US-2854128). LT designated by F. Zuloaga & O. Morrone, *Cat. New. World Grass.* 3: 458 (2003).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (381, Fig. 158), B.Rosengurt, *Gramineas Uruguayas I* (1970) (361, Fig. 155).

Derivation (Clifford & Bostock 2007): Gk. kromyon, onion; rhiza, root. Culm-bases swollen.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes short. Culms erect, 30–90 cm long, 3-noded. Culm-nodes pubescent. Leaf-sheaths 8–16 cm long. Ligule an eciliate membrane, 1 mm long. Leaf-blades flat or involute, 15–30 cm long, 3–4 mm wide. Leaf-blade apex filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 6–12 cm long. Central inflorescence axis 0 cm long. Rhachis narrowly winged, flattened, 1–1.2 mm wide, scabrous on margins. Spikelet packing abaxial, 2-rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, 5–6.5 mm long, 2–3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3–5-veined. Upper glume apex with a unilateral tooth or dentate, 1–2-fid, acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3–5-veined, wrinkled, pilose, acute. Fertile lemma elliptic, 4 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 20$ (2 refs TROPICOS), or 40 (4 refs TROPICOS).

Distribution (TDWG). Continent. South America.

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

TDWG4. Corrientes, Entre Rios, Misiones.

Paspalum crucensis (T.J. Killeen) S. Denham. *Ann. Missouri Bot. Gard.*, 92(4): 494 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya crucensis* T.J. Killeen, *Ann. Missouri Bot. Gard.*, 77(1): 190 (1990).

Illustrations (Books): No illustration found (BKS).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect. Lateral branches lacking. Leaves cauline. Ligule an eciliate membrane. Leaf-blades 4–25 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 5–15 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 3 mm wide, ciliate on margins, terminating in a barren extension, extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 1-rowed. Spikelets in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.33 length of spikelet, membranous, without keels. Lower glume surface pubescent or pilose. Upper glume lanceolate, 1 length of spikelet, membranous, without keels. Upper glume surface pubescent or pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, coriaceous, pubescent or pilose. Fertile lemma elliptic, 3 mm long, coriaceous, without keel. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Distribution (TDWG). Continent. South America.

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

Paspalum crustarium Swallen. *Phytologia*, xiv. 380 (1967).

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: *J.R. Swallen 3985*, 20–25 Mar 1934, Brazil: Maranhão (US-1613877).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. crusta*, anything baked; -arium, pertaining to. Anthoecia dark-brown.

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

Habit, Vegetative Morphology. Annual. Culms erect, 25–35 cm long. Culm-internodes distally glabrous. Leaf-sheaths longer than adjacent culm internode, glabrous on surface, outer margin glabrous or hairy. Ligule an eciliate membrane. Leaf-blades 6–12 cm long, 2.5–4 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade margins scabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or borne along a central axis, unilateral, 2–4 cm long. Rhachis angular, 0.7 mm wide, glabrous on surface. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, obtuse, 2.4–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface irregularly tuberculate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, 3 -veined, irregularly tuberculate, obtuse. Fertile lemma elliptic, 2.4–2.5 mm long, indurate, dark brown, shiny, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil North. Maranhão, Piauí.

Paspalum culiacanum Vasey. *Contrib. U. S. Nat. Herb.* i. 281. (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 Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E. Palmer 1647*, 9 Oct 1891–15 Oct 1891, Mexico: Sinaloa: Lodiago on the Culiacan river, in large bunches around water hole in the mountains, 1891 (US-471366, foto SI; IT: US-865867).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. -anum*, indicating location. From the mountains of Culiacan, Mexico.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 60–85 cm long. Culm-internodes elliptical in section, ridged, distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 2.5 mm long. Leaf-blades ascending, 10–23 cm long, 6–9 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes, bracteate at branch bases. Racemes 3–8, borne along a central axis, unilateral, 4.5–7.5 cm long. Central inflorescence axis 3.5–7 cm long. Rhachis wingless, angular, 1 mm wide, with scattered hairs or glabrous on surface, scabrous on margins. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, obtuse, 2.3 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one to two the lower present in some spikelets, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.66 length of spikelet, membranous, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, 2 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex papillose. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Northwest Mexico. **Mesoamerica.** Guatemala.

Paspalum cultratum (Trin.) S.Denham. *Ann. Missouri Bot. Gard.*, 91(4): 494 (2005).

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 cultratum* Trin., *Gram. Panic.* 126 (1826). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.H. von Langsdorff s.n.*, Jan 1825, Brazil: in graminosis, S. da Congonhas (LE-TRIN-0839.04 (& fig.)). *fide* Chase, *Proc. Biol. Soc. Wash.* 24: 115 (1911).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 495: Fig.14 (2005)).

Derivation (Clifford & Bostock 2007): L. shaped like a knife-blade.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 50–100 cm long. Ligule a fringe of hairs. Leaf-blades linear or lanceolate, 11–35 cm long, 4–10 mm wide. Leaf-blade surface pilose. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, arcuate, unilateral, 6–15 cm long. Rhachis narrowly winged, with sharp-edged midrib, semiterete, 1 mm wide. Spikelet packing irregular, 2–4 -rowed. Spikelets in pairs. Fertile spikelets sessile and pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acute, 4–5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate or orbicular, 0.2–0.5 length of spikelet, hyaline, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 1 length of spikelet, coriaceous, 5 -veined, sulcate (readily splitting), obtuse. Palea of lower sterile floret becoming indurate on keels at maturity, winged on keels. Fertile lemma oblong, 3–3.5 mm long, indurate, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Brazil West Central, Brazil North, Brazil Southeast.

TDWG4.

Paspalum curassavicum Chase. *Journ. Wash. Acad. Sci.* iii. 316 (1943).

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 Curacaoe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 12282*, 27 Feb 1940, Curacao: west of Hato (US-1762213; IT: L, NY-71055, VEN).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -icum, belonging to. From Curassava, that is Curagao.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rootstock evident. Stolons present. Culms 30–40 cm long. Lateral branches ample, arising from mid culm. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades 4–12 cm long, 2.5–4 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes, embraced at base by subtending leaf. Racemes 2, paired, erect, unilateral, 3–3.5 cm long. Rhachis narrowly winged, 0.7 mm wide. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, 2.2–2.4 mm long, 1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate or ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic or ovate, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma ovate, 2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Windward Islands, Venezuelan and Netherlands Antilles.

Paspalum cymbiforme Fourn. *Mex. Pl. Enum., Gram.* 5 (1886).

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>: *vide* TROPICOS and Kew Synonymy Database: ST: *F.M. Liebmann 224*, Jun 1841, Mexico: (US-207661 (ex hb. Haun), US-2942125 (fragm.)). LT: *Liebmann 226*, Mexico: México: San Pablo (C; ILT: US-82531 (fragm. ex C, ex C, & ex hb. Haun)). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 20 (1929). ST: *Liebmann 225*, Oct 1841, Mexico: Consoquitla (C; IST: MO, US-82530 (fragm. ex C, & ex hb. Haun)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. *kymbe*, boat; *forme*, appearance. Lower glume boat-shaped.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–100 cm long. Culm-nodes glabrous or bearded. Lateral branches sparse, arising from mid culm. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1 mm long, brown. Collar pubescent. Leaf-blades spreading, 7–15 cm long, 3–7 mm wide. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade margins glabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes. Peduncle pubescent above. Racemes 2–3, paired or borne along a central axis, arcuate or flexuous, unilateral, 5–7 cm long. Central inflorescence axis unspecialized or flattened. Rhachis broadly winged, membranous, 2–2.5 mm wide, glabrous on surface. Raceme-bases brief, pilose. Spikelets in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, acute, 3 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume lateral veins obscure. Upper glume surface pilose, hairy below. Upper glume margins ciliate. Upper glume hairs 3–3.5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, obscurely veined, sulcate, glabrous or pubescent, hairy above. Fertile lemma elliptic, 2.2 mm long, 0.7 mm wide, indurate, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Central Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica.** El Salvador, Honduras, Nicaragua.

Mexico State. Veracruz. Guerrero, Oaxaca. Chiapas.

Paspalum dasyleurum Kunze ex Desv. *C. Gay, Fl. Chil.* 6. 242. (1853).

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: LT: *E.F. Poeppig 19(39)*, no date, Chile: VIII Región: Antuco (M; ILT: BM, G, P, US-1819512 (fragm.), W). LT designated by Zuloaga & Morrone, *Taxon* 49: 561 (2000).

Illustrations (Books): M.N. Correa, *Flora Patagonica* Parte III, Gramineae (1978) (525, Fig 353).

Derivation (Clifford & Bostock 2007): Gk. *dasy*s, hairy; *pleuron*, rib. The lateral nerves of the subtending glumes and sterile lemmas bear long hairs.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms 60–80 cm long. Culm-internodes distally glabrous. Leaf-sheaths pilose. Ligule an eciliate membrane, 3–5 mm long, brown. Leaf-blades 6–20 cm long, 3–10 mm wide. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence composed of racemes. Racemes 5–8, borne along a central axis, unilateral, 3–6 cm long. Central inflorescence axis 8 cm long. Rhachis wingless. Spikelet packing abaxial, 4 -rowed. Raceme-bases brief, pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, plano-convex, acute, 2–2.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume margins ciliate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, glabrous or puberulous, ciliate on margins, obtuse. Fertile lemma elliptic or ovate, 2–2.8 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South, Juan Fernandez Is.

TDWG4. Neuquén. Santiago, O'Higgins, Maule, Biobio, La Araucania. Los Lagos.

Paspalum dasytrichum Dusen ex Swallen. *Phytologia*, xiv. 363 (1967).

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. Dusén 15700*, 21 Oct 1914, Brazil: Paraná (US-2302271; IT: G, K).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1004, Fig 196 var *glabrum*).

Derivation (Clifford & Bostock 2007): Gk. *dasy*s, hairy; *thrix*, hair. Culms densely villous.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms decumbent, 80–140 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Leaves cauline. Leaf-sheaths keeled, pubescent. Ligule an eciliate membrane, 5–10 mm long, brown. Leaf-blades linear or lanceolate, 15–30 cm long, 7–14 mm wide, coriaceous. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes few or numerous, 10–40, borne along a central axis, unilateral, 1–4 cm long. Central inflorescence axis 10–25 cm long. Rhachis angular. Spikelet packing 2–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, obtuse, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, puberulous, acute. Fertile lemma elliptic, 2 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Paspalum decumbens Sw. *Prod. Veg. Ind. Occ.* 22 (1788).

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), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Jamaica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O.P. Swartz s.n.*, Jamaica (S; IT: B, G, M, P, US-2854654 (fragm. ex S & photo)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (207, Fig. 142), S.A.Renvoize, *Gramineas de Bolivia* (1998) (483, Fig 105), S.A.Renvoize, *The Grasses of Bahia*, 1984 (232, Fig. 86), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (232, Fig. 179), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (503, Fig 86).

Illustrations (Journals): *Ruizia* (13:363, Fig 46i-k (1993)).

Derivation (Clifford & Bostock 2007): *L. decumbo*, fall down. Culms prostrate.

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

Habit, Vegetative Morphology. Perennial, mat forming. Culms decumbent, 15–40 cm long, 1–1.5 mm diam., rooting from lower nodes. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous or pubescent. Leaf-sheaths keeled, glabrous on surface or pubescent, outer margin hairy. Ligule an eciliate membrane, 0.3–0.5 mm long, brown. Leaf-blade base cordate, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 3–7 cm long, 7–12 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Peduncle pilose above. Racemes 1, single, arcuate, unilateral, 0.7–3 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 0.5 mm wide, glabrous on margins or ciliate on margins. Spikelet packing crowded, irregular, 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, scabrous.

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

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.2–0.4 mm long, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume ovate, 1.1–1.2 mm long, 0.75 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, with unevenly spaced veins (close to margin). Palea of lower sterile floret 0.75 length of lemma. Fertile lemma ovate, 1.4–1.5 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.6–0.8 mm long, pallid. Caryopsis with adherent pericarp, orbicular, plano-convex, 0.9 mm long.

$2n = 20$ (1 ref TROPICOS).

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

Country /Province /State. **Malesia.** Java. **Mexico.** Northeast Mexico, Gulf (Mexico). **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South.

TDWG4. Para, Amapa, Amazonas, Acre, Rondonia, Goias, Bahia, Sao Paulo Parana, Catarina, Rio Grande do Sul. Durango. Veracruz.

Paspalum dedecae Quarin. *Bonplandia*, 3(14): 206 (1975).

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: HT: *A. Krapovickas 16974*, 3 Dec 1970, Argentina. Corrientes. Dpto. Santo Tomé: 29 km E de Ruta Nac. No. 14, camino a Colonia Garabí (CTES; IT: BA, BAA, MVFA, US-2739891).

Recent Synonyms: *Paspalum doellii* Chase ex Filg., *Atas Soc. Bot. Brasil, Secc. Rio de Janeiro* 1 (4): 13 (1982)

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of D. M. Dedecca (fl. 1950–1957) Brazilian botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Basal innovations intravaginal. Culms 70–130 cm long. Culm-nodes bearded. Leaf-sheaths keeled, outer margin hairy. Ligule a fringe of hairs. Leaf-blade base tapering to the midrib. Leaf-blades lanceolate, 40 cm long, 3–7 mm wide. Leaf-blade surface pilose, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, digitate, unilateral, 4–8 cm long. Rhachis angular, 0.5 mm wide, scabrous on margins. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 1 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, 3.8–4.8 mm long, 1.7–2.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, prominently veined, glabrous to pubescent, acute. Fertile lemma elliptic, 3.8–4.8 mm long, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS), or 40 (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Corrientes, Misiones.

Paspalum delavayi Henrard. *Fedde, Repert.* xxiv. 239 (1928).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, S-L Chen et al, *Flora of China* 22 (Poaceae) (2006).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Yunnan: 21 June 1880, *Delavay 1804* (HT: L; ST: herb. Balansa ?) Typus speciei in Herb. Lugd. Batav. sub no 908. 93–1722.

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 738).

Derivation (Clifford & Bostock 2007): in honor of Pierre Jean Marie Delavay (1834–95) French cleric who collected in China.

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

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes short. Butt sheaths pubescent, persistent and investing base of culm, with compacted dead sheaths. Culms 70–80 cm long, 4–5 -noded. Culm-internodes elliptical in section. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths keeled, glabrous on surface or hirsute. Ligule an eciliate membrane, 3–4 mm long, entire or lacerate, truncate. Leaf-blades erect, 5–10 cm long, 3–4 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or borne along a central axis, ascending or spreading, unilateral, 2.5–4 cm long. Central inflorescence axis 3–5 cm long. Rhachis narrowly winged, angular, 2 mm wide, scabrous on margins, glabrous on margins. Spikelet packing 2–3 -rowed. Raceme-bases brief, pilose, hairy at base. Spikelets in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or ovate or obovate, dorsally compressed, plano-convex, acuminate, 3 mm long, 1.8–2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, light green, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, light green, 3 -veined. Fertile lemma ovate, gibbous, 2.5 mm long, indurate, yellow, without keel. Lemma surface punctate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Yunnan.

Paspalum delicatum Swallen. *Contrib. U. S. Nat. Herb.* xxix. 268 (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 Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H. Karsten s.n.*, no date, Colombia: Meta: La Quebradita, Llano de San Martin (US-1125921; IT: W).

Illustrations (Books): E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (493, Fig 85).

Derivation (Clifford & Bostock 2007): *L. delicata*. Habit delicate.

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

Habit, Vegetative Morphology. Annual. Culms rambling, straight or zigzag, 15–30 cm long. Lateral branches ample. Leaves without demarcation between sheath and blade. Leaf-sheaths 3–6 cm long, mostly shorter than adjacent culm internode, wider than blade at the collar. Ligule an eciliate membrane, 1–1.3 mm long, acute. Leaf-blades 4–8 cm long, 0.5–1 mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Peduncle 3–8 cm long. Racemes 1, single, arcuate, unilateral, 1.5–3 cm long. Rhachis angular, 0.3–0.4 mm wide. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, 0.7–0.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 0.3–0.5 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, 5 -veined, with unevenly spaced veins (near margins). Fertile lemma obovate, 0.7–0.8 mm long, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. French Guiana, Venezuela. Bolivia, Colombia. Brazil West Central.

Paspalum densum Poir. *Encyc. v. 32.* (1804).

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 Puerto Rico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A.P. Ledru s.n.*, Puerto Rico (P-LA; IT: US-2809342 (fragm. ex P-LA), US-2809342 (fragm. ex FI, P)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (235, Fig. 185), S.A.Renouze, *Gramineas de Bolivia* (1998) (472, Fig. 102), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (233, Fig. 182).

Derivation (Clifford & Bostock 2007): dense. Growing in large clumps.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths spongy. Culms erect, robust, 80–200 cm long. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths as wide as blade at the collar, keeled, reticulately veined, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate or bearded. Ligule an eciliate membrane, 1.5–3 mm long. Collar glabrous or pubescent. Leaf-blades conduplicate, 50–100 cm long, 10–20 mm wide. Leaf-blade surface glabrous. Leaf-blade margins spinulose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 50–100, borne along a central axis, closely spaced (pyramidal), unilateral, 3–9 cm long. Central inflorescence axis 12–20(–40) cm long. Rhachis wingless, angular, 1.2–1.5 mm wide, dark-coloured (purple), scabrous on margins, ciliate on margins. Rhachis hairs 2–5 mm long. Spikelet packing crowded, irregular. Raceme-bases brief, pilose. Spikelets in pairs. 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 orbicular, dorsally compressed, plano-convex, obtuse, 1.9–2.2 mm long, 1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, hyaline, light brown, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, hyaline, light brown, 3 -veined, obtuse. Fertile lemma orbicular, 1.8 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG), Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South.

Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum denticulatum Trin. *Gram. Panic.* 111. (1826).

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 America aequinoctiali. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Lindley s.n.*, no date, America aequinoctiali (LE-TRIN-0441.01a (& fig.); IT: US-2854656 (fragm. ex LE)).

Illustrations (Books): B.Rosengurtt, *Gramineas Uruguayas I* (1970) (370, Fig. 160 as *P. proliferum*).

Derivation (Clifford & Bostock 2007): *L. dens*, tooth; -ulus, diminutive; -ata, possessing. Margins of glumes or pedicels with small teeth.

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

Habit, Vegetative Morphology. Annual. Culms 50–90 cm long. Ligule an eciliate membrane. Leaf-blades 17–26 cm long, 3–4 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 10–12, borne along a central axis, unilateral, 1–3 cm long. Central inflorescence axis 9–10 cm long. Rhachis 0.7–0.8 mm wide, scabrous on margins, ciliate on margins. Rhachis hairs 3–4 mm long. Spikelet packing 2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, subacute, 1.7–2.1 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface asperulous, rough on veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, scabrous, rough on veins. Fertile lemma elliptic, 1.7–2.1 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$N = 20$ (1 ref TROPICOS). $2n = 40$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Costa Rica, Guatemala, Honduras. Cuba. Venezuela. Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil South. Argentina Northwest, Paraguay, Uruguay.

TDWG4. Catamarca, Jujuy, Salta, Santiago del Estero, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Distrito Federal, Entre Rios, Formosa, Misiones, Santa Fe. Distrito Federal, Mexico State, Puebla, Morelos. Coahuila, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Veracruz. Sinaloa. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas, Tabasco.

Paspalum difforme Le Conte. *Journ. Phys.* xci. 284. (1820).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *J. Le Conte s.n.*, USA: Georgia (P; ILT: PH, US-2854657 (fragm. ex P & photo)). LT designated by Chase, Contr. U.S. Natl. Herb. 28: 190 (1929).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. unlike* what is usual. Leaf-blades with pellucid spots.

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

Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes short, knotty. Culms geniculately ascending, 35–75 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths keeled, glabrous on surface, outer margin glabrous or hairy. Ligule an eciliate membrane, 2 mm long. Leaf-blades ascending, 7–25 cm long, 5–10 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially or on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–3(–4), paired or borne along a central axis, unilateral, 3.5–8 cm long. Rhachis wingless, angular, 1 mm wide. Raceme-bases brief, hirsute. Spikelets in pairs. 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 obovate, dorsally compressed, turgidly plano-convex, obtuse, 3.5–4 mm long, 3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface wrinkled. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, 3–3.5 mm long, 2.2–2.5 mm wide, indurate, pallid or light brown, without keel. Lemma surface tuberculate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southeastern USA. Georgia.

Paspalum dilatatum Poir. *Encyc. v. 35.* (1804).

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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960), T.G.Tutin et al, *Flora Europaea* 5 (1980), N.Tsvelev, *Grasses of the Soviet Union* (1983), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina: Buenos Aires, *P. Commerson s.n.* (HT: P-LAM).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (Pl. 13), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (244, Fig. 154), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (397, Fig. 150), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 408), L.Boulos, *Flora of Egypt* 4 (2005) (300, Pl. 88), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (493, Pl. 189), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (580), C-C Hsu, *Taiwan Grasses* (1975) (584, Fig. 1440), K.M.Matthew, *Flora Palni Hills* (1996) (853, Pl. 853), H.J.Noltie, *The Grasses of Bhutan* (2000) (713, Fig. 42), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (468, Fig. 401), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (243, Pl. 71), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (598, Fig. 121), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (327), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (332), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (223, Fig. 36), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (580), F.W.Gould, *The Grasses of Texas* (1975) (515, Fig. 271), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (228, Fig. 178), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1004, Fig. 196 var. *dilatatum*), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (406, Fig. 170 & 407, Fig. 171), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (531, Fig. 139), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (525, Fig. 354), B.Rosengurt, *Gramineas Uruguayas I* (1970) (362, Fig. 156 as ssp. *dilatatum* & ssp. *flavescens*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 734), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:96(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, L.Boulos, *Flora of Egypt* 4 (2005);, F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): *L. differo*, spread abroad; -ata, possessing. Racemes spreading in pseudo-verticils.

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

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations flabellate. Culms 40–180 cm long. Ligule an eciliate membrane, 3 mm long. Leaf-blades 6–45 cm long, 3–12 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes (2–)3–5(–11), borne along a central axis, unilateral, 4–11 cm long. Central inflorescence axis 2–20 cm long. Rhachis narrowly winged, angular, 1.2 mm wide. Spikelet packing regular, 2–4 -rowed. Spikelets in pairs. Fertile spikelets sessile and pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, plano-convex, acute, 2.8–3.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, yellow, without keels, 3 -veined. Upper glume surface pilose. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, pilose, acute. Fertile lemma ovate, gibbous, 2.5–3 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $N = 20$ (2 refs TROPICOS), or 30 (2 refs TROPICOS). $2n = 40$ (5 refs TROPICOS), or 50 (2 refs TROPICOS).

Distribution (TDWG). Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America, South America, Antarctica.

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

Country /Province /State. : Great Britain (*). : France, Portugal, Spain, Azores. : Italy. **Northern Africa, Macaronesia, West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa** (*), **Middle Atlantic ocean, Western Indian ocean.** Egypt. Azores, Madeira. Ghana. Tanzania. Angola, Zambia, Zimbabwe. Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Northern Cape, Western Cape, Eastern Cape. Ascension. Mauritius (*), Madagascar (*). **Caucasus, Western Asia, China, Eastern Asia.** Iran, Iraq. China South Central, China Southeast. Nansei-Shoto, Ogosawara-shoto, Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Eastern Himalaya, Pakistan (*), Sri Lanka. Myanmar, Vietnam. Borneo, Java, Malaya, Singapore, Philippines. New Guinea, Solomon Is (*). **Australia, New Zealand.** Western Australia (*), South Australia (*), Queensland (*), New South Wales (*), A.C.T. (*), Victoria (*), Tasmania (*), Lord Howe-Norfolk Is (*). Chatham Is, Kermadec Is, New Zealand North I, New Zealand South I. **Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific.** Fiji (*), Niue (*), New Caledonia (*), Samoa (*), Tonga (*). Cook Is (*), Easter Is (*), Marquesas (*). Marianas. Hawaii (*). **North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Oklahoma. West Virginia. Arizona, California, Nevada, Utah. New Mexico, Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Costa Rica, El Salvador, Guatemala. Cuba, Dominican Republic, Haiti, Jamaica. Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil Southeast, Brazil South. Argentina Northeast, Argentina South, Argentina Northwest, Chile Central, Desventurados Is, Paraguay, Uruguay. **Subantarctic islands.** Tristan de Cunha.

TDWG4. Fujian, Guangxi, Hong Kong, Shanghai, Zhejiang. Guizhou, Hubei, Yunnan. Darjeeling, Bhutan, Sikkim. Assam, Meghalaya. Kerala. Tamilnadu, Uttah Pradesh, West Bengal. Himachal Pradesh. Kimberley, South-West. Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains. Sao Paulo Parana, Catarina, Rio Grande do Sul. Catamarca, Jujuy, Mendoza, Salta, Santiago del Estero, San Juan, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Distrito Federal, Entre Rios, La Pampa, Misiones, Santa Fe. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Coquimbo, Valparaiso, Santiago, O'Higgins, Maule, Biobio, La Araucania. Distrito Federal, Mexico State, Puebla, Morelos, Tlaxcala. Coahuila, Chihuahua, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Baja California. Jalisco, Michoacan. Chiapas.

Paspalum dispar Chase. *Contrib. U. S. Nat. Herb.* xxviii. 96 (1929).

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 Dominican Republic. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman H6248*, 4 Jun 1926, Dominican Republic: Hispaniola I., Montecristi Prov. (US-1299915).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (208, Fig. 144).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 500: Fig.16 (2005)).

Derivation (Clifford & Bostock 2007): L. unequal. Glumes unequal in length or nerve number.

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

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 12–35 cm long. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths as wide as blade at the collar, keeled, pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1.5 mm long. Leaf-blades 4–15 cm long, 3–5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Peduncle pubescent above. Racemes 1, single, arcuate, unilateral, 1.5–4.5 cm long. Rhachis wingless, angular. Spikelets in pairs. 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, plano-convex, obtuse, 1.9 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2 length of spikelet (lower) or 0.66–0.75 length of spikelet (upper of pair), 0–1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, obtuse. Palea of lower sterile floret 0.1–0.9 length of lemma. Fertile lemma elliptic, 1.8 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Dominican Republic.

Paspalum dissectum (L.) L. *Sp. Pl.* ed. II. 81. (1762).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Kalm s.n.*, USA (LINN-79.1; probable isotype, US-2855315 ex LINN). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 115–116 (1908); see also Chase, *Contr. U.S. Natl. Herb.* 28: 28 (1929).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (574), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (199, Fig. 125).

Derivation (Clifford & Bostock 2007): L. cut up. Lodicules emarginate.

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

Habit, Vegetative Morphology. Perennial, mat forming. Culms decumbent or prostrate, 5–50 cm long. Lateral branches ample. Ligule an eciliate membrane. Leaf-blades 3–6 cm long, 2–5 mm wide. Leaf-blade surface glabrous or pubescent, sparsely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, borne along a central axis, unilateral, 1–3 cm long. Central inflorescence axis 2–6 cm long. Rhachis broadly winged, foliaceous, 2–3 mm wide. Spikelet packing abaxial, 2 -rowed. 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, obtuse or subacute, 1.8–2.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblong, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma oblong, 1.8–2.2 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. North-central USA, South-central USA, Southeastern USA. Kansas. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. **Caribbean, Western South America.** Bahamas, Bermuda, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago, Venezuelan and Netherlands Antilles. Colombia.

Paspalum distachyon Poir. ex Trin. *Mem. Acad. Petersb. Ser. VI. iii. II.* 142. (1834).

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 Santo Domingo. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Poiteau s.n.*, West Indies: Santo Domingo (LE-TRIN-0446.01 (fragm. ex hb. Mertens & fig.); IT: P, US-2854665 (fragm. ex P)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (201, Fig. 130).

Derivation (Clifford & Bostock 2007): Gk. *dis*, twice; *stachys*, spike as of an ear of wheat. Inflorescences with two branches or with regularly bifurcating branches.

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

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated. Culms erect, slender, 12–40 cm long, wiry. Culm-internodes elliptical in section. Leaf-sheaths longer than adjacent culm internode, keeled. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane, 0.3 mm long. Leaf-blades erect, involute, 6–15 cm long, 1–2 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 1–2.5 cm long. Rhachis wingless, angular, 0.6–0.7 mm wide, scabrous on margins. Spikelet packing abaxial. Raceme-bases linear. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, dorsally compressed, acute, 2.5–3 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3–5 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined. Fertile lemma elliptic, 2.1 mm long, 1 mm wide, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands.

Paspalum distichum L. *Syst. Nat.* ed. 10, ii. 855 (1759).

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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), T.G.Tutin et al, *Flora Europaea* 5 (1980) (as *P. paspalodes*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Jamaica. **Basionym or Replaced Name:** *Paspalum paspalodes* (Michx.) Scribn., *Mem. Torrey Bot. Club*, 5: 29 (1894). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Browne s.n.*, Jamaica (LINN-75.9, second fertile culm from the left). LT designated by Guedes, *Taxon* 25: 513 (1976), and earlier discussed by Jovet & Guedes, *Taxon* 21: 546 (1972); formally ruled on by Nom. Comm., *Taxon* 32: 281 (1983).

Recent Synonyms: *Paspalum paucispicatum* Vasey, *Contrib. U. S. Nat. Herb.* 1: 281. (1893).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (390, Fig. 331), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 409 as *P. paspalodes*), L.Boulos, *Flora of Egypt* 4 (2005) (300, Pl. 88), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (495, Pl. 190 as *P. paspaloides*), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (357, Fig. 139), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (578), C-C Hsu, *Taiwan Grasses* (1975) (585, Fig. 1441), K.M.Matthew, *Flora Palni Hills* (1996) (854, Pl. 854 as *P. paspalodes*), H.J.Noltie, *The Grasses of Bhutan* (2000) (713, Fig. 42), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (469, Fig. 402), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (598, Fig 121), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (328), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (223, Fig. 36), 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) (576), F.W.Gould, *The Grasses of Texas* (1975) (509, Fig. 267 as var. *distichum*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (201, Fig. 131), S.A.Renvoize, *The Grasses of Bahia*, 1984 (207, Fig. 76), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (945, Fig. 190 & 962, Fig. 192 & as *P. paspalodes*),

A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (3, Fig. 2 & 379, Fig. 157), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (420, Fig. 154), M.N.Correa, *Flora Patagonica Parte III*, Gramineae (1978) (522, Fig. 351), B.Rosengurt, *Gramineas Uruguayas I* (1970) (364, Fig. 157), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 736), E.Hafliger & E.Schultz, Grass Weeds, CIBA-GEIGY (1:103(1980) as *Paspalum paspaloides*).

Illustrations (Journals): *Ruizia* (13:356, Fig 45k-l (1993)).

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);, F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): Gk. distichos, two-rowed. Plants with conspicuously two-rowed spikelets or leaves.

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

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms decumbent, 8–60 cm long. Ligule an eciliate membrane. Leaf-blades flat or convolute, 3–14 cm long, 3–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–3), paired, unilateral, 2–8 cm long. Rhachis narrowly winged, angular. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, turgidly plano-convex, acute, 3–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two (rarely), reaching apex of florets, thinner than fertile lemma. Lower glume when present ovate, 0.1–0.2 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Upper glume elliptic, 1 length of spikelet, coriaceous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, coriaceous, 3 -veined, acute. Fertile lemma ovate, gibbous, 2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. $N = 24$ (1 ref TROPICOS). $2n = 60$ (1 ref TROPICOS), or 61 (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia, Pacific, North America, South America.

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

Country /Province /State. : Great Britain (*). : France, Portugal, Spain, Azores. : Albania, Bulgaria, Greece, Italy, Turkey Europe. Krym. **Northern Africa, Macaronesia, South tropical Africa, Southern Africa, Middle Atlantic ocean, Western Indian ocean.** Algeria, Egypt, Libya, Morocco. Azores, Canary Is, Madeira. Zimbabwe. Namibia, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Northern Cape, Western Cape, Eastern Cape. St Helena. Mauritius. **Middle Asia, Caucasus, Western Asia, Arabian Peninsula, China, Eastern Asia.** Turkmenistan, Tadjikistan. Iran. Oman. China South Central, Hainan, China North-Central, China Southeast. Japan, Nansei-Shoto, Ogosawara-shoto, Taiwan. Japan Honshu, or Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia.** Bangladesh, Eastern Himalaya, Pakistan, Sri Lanka, West Himalaya. Andaman Is, Myanmar. Java, Malaya, Moluccas, Philippines, Sulawesi. **Australia, 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 Pacific, South-central Pacific, North-central Pacific.** Fiji, New Caledonia. Hawaii (*). **Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** New Jersey. Arizona, California, Nevada, Utah. New Mexico, Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua. Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Galapagos, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Argentina Northeast, Argentina South, Argentina Northwest, Chile North, Chile Central, Juan Fernandez Is, Paraguay, Uruguay.

TDWG4. Shandong. Anhui, Fujian, Guangxi, Henan, Hong Kong, Hunan, Jiangsu, Zhejiang, Guizhou, Hubei, Sichuan, Yunnan. Bhutan, Sikkim. Assam, Meghalaya. Andhra Pradesh. Orissa, Punjab, Rajasthan, Tamilnadu, Uttah Pradesh. Jammu Kashmir. South-West. Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains. Catamarca, Jujuy, La Rioja, Mendoza, Salta, Santiago del Estero, San Juan, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Distrito Federal, Entre Rios, Formosa, La Pampa, Misiones, Santa Fe. Río Negro. Antofagasta. Valparaiso, Biobio, La Araucania. Distrito Federal,

Mexico State, Morelos, Puebla. Aguascalientes, Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Zacatecas. Veracruz. Baja California, Sonora. Jalisco, Michoacan, Oaxaca.

Paspalum distortum Chase. *Contrib. U. S. Nat. Herb.* xxviii. 142 (1929).

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 Jamaica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *W. Harris 12569*, 16 Oct 1917, Jamaica: Troy (US-1010224; IT: NY-71057).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (219, Fig. 162).

Derivation (Clifford & Bostock 2007): *L. distanqueo*, distort. Sterile lemma irregularly crumpled.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect or geniculately ascending, 15–50 cm long, wiry, 2–3 -noded. Leaf-sheaths keeled, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.2 mm long. Leaf-blades tortuous, involute, 15–40 cm long, 1–1.5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 2.5–6 cm long. Rhachis wingless, semiterete. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or rhomboid, dorsally compressed, plano-convex, acute, 2 mm long, 1.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface wrinkled. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, wrinkled, acute. Fertile lemma elliptic, 1.6 mm long, 1 mm wide, indurate, yellow, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum divergens Doell. *Mart. Fl. Bras.* ii. II. 71. (1877).

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: IT: *P. Salzmann 667*, no date, Brazil: Bahia (US-1385529 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. divergo*, go in different directions. Panicle branches drooping rather than held outstretched in an open panicle.

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

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 55 cm long. Culm-nodes black. Ligule an eciliate membrane. Leaf-blades lanceolate, 5–6 cm long, 6–8 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 9 cm long. Central inflorescence axis 0 cm long. Rhachis flattened. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2.5 mm long, indurate, shiny, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.
TDWG4. Bahia.

Paspalum durifolium Mez. *Fedde, Repert.* xv. 67 (1917).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *B. Balansa* 68, 15 Nov 1875, Paraguay: Caaguazú (B; IT: G, L, P, US-2854672 (fragm. ex L)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1004, Fig 196), B.Rosengurt, *Gramineas Uruguayas I* (1970) (374, Fig. 162).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations intravaginal. Culms erect, 150–200 cm long, 3-noded. Leaf-sheaths antrorsely scabrous, glabrous on surface. Ligule an eciliate membrane, 2–2.5 mm long, brown. Leaf-blade base tapering to the midrib. Leaf-blades conduplicate, 30–50 cm long, 5–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, borne along a central axis, unilateral, 2–12 cm long. Central inflorescence axis 12–20 cm long. Rhachis angular. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, 3–3.5 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5-veined. Upper glume surface pubescent. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3-veined, puberulous, ciliate on margins, acute. Fertile lemma elliptic, 2.5–2.8 mm long, indurate, yellow, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 60$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil South. Paraguay, Uruguay.

TDWG4. Mato Grosso, Catarina, Rio Grande do Sul. Corrientes, Santa Fe.

Paspalum edmondii Leon. *Mem. Torr. Bot. Cl.* xvi. 58 (1920).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Brother León & Brother Edmond* 8607, 4 Jan 1919, Cuba: Sabana de Motembo (LS; IST: NY-71058, US-1060723). ST: *Bro. León & Edmond* 8682, May 1919, Cuba. Habana: Vedado (from seed collected in Sabana de Motembo) (LS; IST: US-1060723).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (224, Fig. 172).

Derivation (Clifford & Bostock 2007): in honor of Edmond a colleague of Bro Lion who collected in Cuba.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Stolons present. Culms slender, 2–6 cm long. Culm-nodes pubescent. Leaves mostly basal. Leaf-sheaths pilose. Ligule an eciliate membrane, 1 mm long. Leaf-blades 1–6 cm long, 1–2 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 1–1.5 cm long. Rhachis wingless, flattened, 0.5 mm wide. Spikelet packing abaxial. Raceme-bases brief, hirsute. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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 ovate, dorsally compressed, plano-convex, caudate, 1.5–2 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7-veined. Upper glume surface wrinkled. Upper glume apex erose, caudate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5 -veined, concave across back, acuminate. Fertile lemma ovate, 1.2–1.4 mm long, 1 mm wide, indurate, dark brown, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Paspalum ekmanianum Henrard. *Meded. Herb. Leid. No.* 40, 49 (1921).

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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Herzog 1654*, Mar 1911, Bolivia: Santa Cruz: Rio Pirai (L, IT: B, G, US-1161341).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (459, Fig 99).

Derivation (Clifford & Bostock 2007): L. - *anum*, indicating connection. In honor of Erik Leonard Ekman (1888–1931) Swedish botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 30–60 cm long. Ligule a fringe of hairs. Leaf-blades 5–15 cm long, 1.5–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 3–15 cm long. Rhachis wingless, angular, glabrous on surface. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, plano-convex, obtuse, 1.5–2 mm long, with hairs extending 2 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblong, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface setose, with tubercle-based hairs. Upper glume margins tuberculate, setose. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 5 -veined, setose, with tubercle-based hairs, tuberculate on margins, setose on margins, obtuse. Fertile lemma ovate, gibbous, 1.5–2 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute. Palea involute, coriaceous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina Northwest.

TDWG4. Jujuy.

Paspalum ellipticum Doell. *Mart. Fl. Bras. ii. II.* 71. (1877).

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: IT: *L. Riedel 1650 ex parte*, Sep, Brazil: São Paulo: Mogi (B; IT: LE, W (possible), FB(probable), FR, P(probable), US-2854684 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. *elluipsis*, ellipse; -*ike*, belonging to. Spikelets elliptical in outline.

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

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, slender, 60–100 cm long. Ligule an eciliate membrane. Leaf-blades filiform, 15–30 cm long, 1–1.5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 4–6 cm long. Rhachis wingless, angular, 0.5 mm wide. Spikelet packing irregular. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, compressed slightly, plano-convex, 4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume margins ciliate. Upper glume hairs white. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, smooth or wrinkled, ciliate on margins, bearing white hairs, obtuse. Fertile lemma elliptic, gibbous, 4 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. TDWG4.

Paspalum equitans Mez. *Fedde, Repert.* xv. 69 (1917).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Balansa* 87, 25 Sep 1874, Paraguay: Guairá: in paludibus Cordilleræ de Villa Rica (US-2854687 (fragm. ex B, L, P)). ST: *E. Hassler* 11646, Paraguay: in regione calcarea cursus superiores fluminis Apa (US-2854687 (fragm.)). LT: *E. Hassler* 10779, 1907–1908, Paraguay: in altiplanitie Sierra de Amambay (G; ILT: BM, LIL, P, US-951938, W).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1004, Fig 196), B.Rosengurtt, *Gramineas Uruguayas I* (1970).

Derivation (Clifford & Bostock 2007): L. equito, ride. Leaves distinctly equitant.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Basal innovations flabellate. Culms robust, 100 cm long. Culm-internodes distally glabrous. Leaf-sheaths longer than adjacent culm internode, keeled, glabrous on surface. Ligule an eciliate membrane, truncate. Leaf-blades conduplicate, 6–10 mm wide, stiff. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes 4–8, digitate, unilateral, 5–13 cm long. Rhachis angular. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, 4 mm long, indurate, yellow, shiny, without keel. Lemma surface punctate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil North, Brazil South. Paraguay, Uruguay.

TDWG4. Sao Paulo Parana, Catarina, Rio Grande do Sul. Corrientes, Misiones.

Paspalum erectum Chase. *Contrib. U. S. Nat. Herb.* xxviii. 189 (1929).

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: HT: A.S. Hitchcock 7078, 21 Sep 1910, Mexico: Colima: Alzada (US-929913; IT:US-1385551).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. held upright. Spikelets or inflorescence branches held erect.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 100 cm long. Lateral branches lacking. Leaf-sheaths pilose. Ligule an eciliate membrane, ciliate from base of abaxial surface, lacerate. Leaf-blades conduplicate, 15–30 cm long, 2–5 mm wide. Leaf-blade surface pilose, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 4–5, borne along a central axis, unilateral, 4.5–8 cm long. Rhachis 1 mm wide. Spikelet packing crowded. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, 2.8 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, pallid or purple, without keels. Upper glume surface papillose.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, pallid or purple, papillose. Fertile lemma elliptic, 2.8 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico.

TDWG4. Guanajuato. Colima, Jalisco, Michoacan.

Paspalum erianthoides Lindm. *Svensk. Vet. Akad. Handl.* iv. no. 6, 6 (1900).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *B. Balansa* 72, 10 Oct 1874, Paraguay: Guairá: Villa Rica, in pascuis (S; IT: BM, G, K, P, US-2854688 (fragm. ex S)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (983, Fig 194).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (91): 235: Fig.4 (2004).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to *Paspalum erianthum*.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 100 cm long. Lateral branches lacking. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, brown. Leaf-blades 30–50 cm long, 1–2 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 6–9, borne along a central axis, unilateral, 1–5 cm long. Rhachis angular. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 4–5 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, ciliate on margins, acute. Fertile lemma oblong, 4 mm long, indurate, yellow, without keel. Lemma surface punctate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil Southeast, Brazil South. Argentina Northeast, Paraguay.

TDWG4. Sao Paulo Parana, Catarina, Rio Grande do Sul. Corrientes, Misiones.

Paspalum erianthum Nees ex Trin. *Gram. Panic.* 121. (1826).

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.H. von Langsdorff am Nees ab Esenbeck s.n.*, Oct., Brazil: Prov. Minas Geraes et in campis glareosis pr. Lagoa Santa (LE-TRIN-0450.03; IT: US-2854690 (fragm. ex LE-TRIN)).

Recent Synonyms: *Paspalum album* Swallen, *Phytologia* 14(6): 367 (1967). *Paspalum sanguinolentum* Trin., *Gram. Pan.* 116. 1826.

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (983, Fig. 194), B. Rosengurt, *Gramineas Uruguayas I* (1970) (375, Fig. 163).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (91: 236: Fig. 5 (2004)).

Derivation (Clifford & Bostock 2007): Gk. erion, wool; anthos, flower. With wooly glumes, lemmas or awns.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–115 cm long. Leaf-sheaths pubescent. Ligule an eciliate membrane. Leaf-blades erect or ascending, 10–25 cm long, 6–8 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 3–9, borne along a central axis, unilateral, 3–5 cm long. Central inflorescence axis 3–12 cm long. Rhachis wingless, angular, 1 mm wide. Spikelet packing irregular. Spikelets in pairs. 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 ovate, dorsally compressed, compressed slightly, plano-convex, acute, 4–4.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface villous. Upper glume hairs white. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, pilose, bearing white hairs, acute. Fertile lemma ovate, gibbous, 3.5–4 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. $2n = 80$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. Mesoamerica, Northern South America, Western South America, Brazil, Southern South America. Costa Rica, Honduras, Nicaragua. Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Argentina Northeast, Argentina South, Paraguay, Uruguay.

TDWG4. Mato Grosso, Goias, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Guerrero, Oaxaca. Chiapas.

Paspalum eucomum Nees ex Trin. Sp. Gram. 1:t.110 (1828).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *F. Sellow s.n.*, Brazil (LE-TRIN-0451.02 (& fig.)); IT: BM, K, P, SI (photo ex K), US-2854694 (fragm. ex B), US-2854695 (fragm. ex B, LE), US-733034 (ex hb. Mez), US-929227 (ex B)).

Recent Synonyms: *Paspalum splendens* Hack. *Oesterr. Bot. Z.* 51:238 (1901).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. eu-, well; kome, head of hair. Glumes and sterile lemmas invested in long hairs.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–80 cm long. Ligule an eciliate membrane. Leaf-blades 10–20 cm long, 1–3 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 5–10 cm long. Central inflorescence axis 0 cm long. Rhachis narrowly winged, angular, 1.5–2.5 mm wide, dark-coloured (purple), terminating in a barren extension, extension flattened. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 2.5 mm long, with hairs extending 2 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume margins ciliate. Upper glume hairs 2 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 3 -veined, with thickened veins, pilose, ciliate on margins, bearing hairs 1 mm long, acute. Fertile lemma obovate, 2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Goias.

***Paspalum exaltatum* J. & C. Presl. *Rel. Haenk.* i. 219. (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Uruguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Haenke s.n.*, no date, Cordillera de Chili (PR; IT: B, US-2854692 (fragm. ex B & photo), W). Specimen mislabeled, the collection is from Montevideo, Uruguay.

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1004, Fig. 196), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (404, Fig. 169), B.Rosengurt, *Gramineas Uruguayas I* (1970) (377, Fig. 165).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): L. lofty. Culms tall.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 100–250 cm long. Ligule an eciliate membrane. Leaf-blades 15–60 cm long, 3–12 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 10–44, borne along a central axis, unilateral, 2–10 cm long. Central inflorescence axis 15–20 cm long. Rhachis wingless, angular, 0.5–0.6 mm wide. Spikelet packing irregular, 6–10 -rowed. Spikelets in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, acute, 3–4 mm long, 1.5–1.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, pubescent on margins. Fertile lemma elliptic, 2.5–2.9 mm long, 1.4–1.6 mm wide, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. Australia. Queensland (*). **Brazil, Southern South America.** Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. South East. Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. San Luis. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Misiones, Santa Fe.

***Paspalum expansum* Doell. *Mart. Fl. Bras.* ii. II. 81. (1877).**

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: IT: *W.J. Burchell 8640*, no date, Brazil: Goiás (B, K, P, US-1127318 (fragm. ex W), US-952274 (fragm. ex BR, LE), W).

Recent Synonyms: *Paspalum swallenii* Chase ex Swallen, *Phytologia* 14: 389 (1967). *Paspalum morulum* Swallen, *Phytologia* 14: 389 (1967).

Illustrations (Books): No illustration found (BKS).

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

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–30 cm long. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades 4–8 cm long, 2–3 mm wide. Leaf-blade surface hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 1.5–2.5 cm long. Central inflorescence axis 1.5–2 cm long. Rhachis narrowly winged, angular, 1 mm wide. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate or rhomboid, dorsally compressed, plano-convex, obtuse, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma orbicular, 1.5 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast, Brazil North. Maranhao, Piaui.

Paspalum falcatum Nees ex Steud. *Syn. Pl. Gram.* 31. (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 Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *F. Sellow* 5531, no date, Brazil (B; IT: BAA-2137 (fragm. ex B), K, L, US-1645168, US-2855324 (fragm. ex B)).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (224, Fig. 83), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (918, Fig 184), B.Rosengurt, *Gramineas Uruguaya* (1970) (348, Fig. 151).

Derivation (Clifford & Bostock 2007): *L. falx*, sickle; -ata, possessing. Inflorescence branches curved.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect, 60–150 cm long. Culm-internodes distally glabrous or pubescent. Culm-nodes brown. Lateral branches lacking. Ligule an eciliate membrane, truncate or acute. Leaf-blades flat or involute, 8–35 cm long, 3–7 mm wide, stiff. Leaf-blade surface glabrous or pilose. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–15, borne along a central axis, arcuate, unilateral, 1.25–3.75 cm long. Central inflorescence axis 5–15 cm long. Rhachis broadly winged, membranous, folded longitudinally to embrace spikelets, 2.5 mm wide, dark-coloured (purple), ciliate on margins. Spikelet packing crowded, 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, subacute, 1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblong, 1 length of spikelet, membranous, without keels, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma oblong, 1.5 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Paraguay, Uruguay.

TDWG4. Goias, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Chaco, Entre Rios, Formosa, Misiones.

Paspalum fasciculatum Willd. ex Fluegge. *Gram. Monog.* 69. (1810).

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).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *J.C von Hoffmannsegg s.n.*, Brazil (B-W; IT: BM, P, US-2855329 (fragm. ex B-W)). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 176 (1929).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (231, Fig. 180), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (231, Fig. 178), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (409, Fig. 172), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (421, Fig. 155).

Illustrations (Journals): *Ruizia* (13:366 Fig 47d-f (1993)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): L. fascis, bundle; -ulus, diminutive. -ata, possessing. With spikelets or branches clustered in the inflorescence.

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

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 200–300 cm long, 5–7 mm diam., rooting from lower nodes. Culm-internodes solid, distally glabrous. Culm-nodes swollen. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface or pilose, outer margin hairy. Leaf-sheath oral hairs ciliate, 3–4 mm long. Ligule an eciliate membrane, 0.3–0.7 mm long, brown. Leaf-blades 20–70 cm long, 10–20 mm wide. Leaf-blade midrib keeled beneath. Leaf-blade surface glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence composed of racemes. Peduncle 3–6 cm long. Racemes 8–33, borne along a central axis, unilateral, 7–16 cm long. Central inflorescence axis 5–11 cm long. Rhachis narrowly winged, 0.8–1.4 mm wide. Spikelet packing abaxial, 2 -rowed. Raceme-bases brief, 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, compressed strongly, acuminate, 3.7–4.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.05 mm long, 0 -veined. Lower glume lateral veins absent. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume margins ciliate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–7 -veined, ciliolate on margins. Fertile lemma ovate, 3.3–4.3 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2.2–2.8 mm long, orange. Caryopsis with adherent pericarp, ellipsoid, 2 mm long.

$2n = 20$ (1 ref TROPICOS).

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

Country /Province /State. **Australia.** Western Australia (*). **Mexico.** Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Windward Islands, Trinidad-Tobago. French Guiana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil North, Brazil Southeast. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Kimberley. Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso. Tucuman. Chaco, Corrientes, Entre Rios, Formosa, Santa Fe. Jalisco, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum filgueirasii Morrone & Zuloaga. *Syst. Bot.* 38:309 (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).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Goiás: Mun. Alto Paraíso: Parque Nacional da Chapada dos Veadeiros, brejo quemado recentemente, 25 Sep 1995, T.S. Filgueiras & M. Pereira Neto 3228 (HT: IBGE; IT: SI).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Tarisco S. Filuerias (1950-) Brazilian botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–45 cm long, 2–3 -noded. Culm-internodes elliptical in section, 6 cm long, smooth, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths 4–8 cm long, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades filiform, involute, 15–20 cm long, 0.5 mm wide, stiff.

Leaf-blade surface pilose, hairy abaxially, with tubercle-based hairs. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex pungent.

Inflorescence. Inflorescence composed of racemes. Peduncle 15–25 cm long. Racemes 1, single, unilateral, 2–5 cm long. Rhachis angular, 0.5–0.8 mm wide, puberulous on surface, smooth on margins or scaberulous on margins. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, glabrous or puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, acute, 3.6–4 mm long, 1.2–1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure or two, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0–2.4 mm long, 0–0.66 length of spikelet, membranous, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume primary vein ciliate. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, eciliate on midvein or ciliolate on midvein, ciliolate on margins, acute. Fertile lemma elliptic, 2.8–3.8 mm long, 1–1.3 mm wide, indurate, pallid, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Lodicules 2, cuneate, 0.2 mm long, fleshy. Anthers 3, 1.1–1.3 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum filifolium Nees ex Steud. *Syn. Pl. Gram.* 22. (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Sellow s.n.*, Brazil (B; IT: K, LE-TRIN-0456.04 (fragm. ex B), US-2855333 (photo, SI)). 303 *P. filifolium* Nees in herb. Brasil. Berolio. IT: (LE-TRIN-0456.03 (probable)). IT: *F. Sellow 4877*, no date, Brazil (US-2855333 (fragm.)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineae* (1981–1982) (945, Fig 190).

Derivation (Clifford & Bostock 2007): L. filum, thread; folium, leaf. Leaf-blades very narrow.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 15–50 cm long. Culm-nodes black. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades filiform, convolute, 23–30 cm long, 1–2 mm wide, glaucous.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–3), paired, unilateral, 5–8 cm long. Central inflorescence axis 0 cm long. Rhachis angular, 0.75 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 4 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2.75 mm long, indurate, yellow, without keel. Lemma surface scaberulous. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil South.

TDWG4. Goias, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Paspalum filiforme Sw. *Prod. Veg. Ind. Occ.* 22. (1788).

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 Jamaica. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *O.P. Swartz s.n.*, no date, Jamaica (S; IT: US-2855334 (fragm. ex S)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (218, Fig. 161).

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms decumbent, slender, 20–70 cm long, 2-noded. Lateral branches lacking. Leaf-sheaths 10–12 cm long, keeled, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.2 mm long. Leaf-blades straight or tortuous, filiform, 20–50 cm long, 1 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, arcuate, unilateral, 3–8 cm long. Rhachis wingless, semiterete. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, plano-convex, subacute, 1.6–1.8 mm long, 0.7–0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5-veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5-veined, acute. Fertile lemma elliptic, 1.4–1.5 mm long, 0.7 mm wide, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum fimbriatum Kunth. *Nov. Gen. et Sp.* i. 93. (1815).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Colombia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *F.W.H.A. von Humboldt & A.J.A. Bonpland s.n.*, Oct, Colombia: Tolima (P; IT: US-2855335 (fragm. ex P)).

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (584), C-C Hsu, *Taiwan Grasses* (1975), W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1572, Pl. 233), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (580), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (240, Fig. 195), S.A.Renouvoise, *The Grasses of Bahia*, 1984 (204, Fig. 75), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:97(1980)).

Derivation (Clifford & Bostock 2007): *L. fimbriata*, fringe; -ata, possessing. With fringed glumes or lemmas.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 10–65 cm long. Ligule a fringe of hairs. Leaf-blades linear or lanceolate, 9–25 cm long, 4–12 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, borne along a central axis, unilateral, 1–5.5 cm long. Central inflorescence axis 1–10 cm long. Rhachis broadly winged, with sharp-edged midrib, 1.5–2 mm wide. Spikelet packing irregular, 2–4-rowed. Spikelets in pairs. Fertile spikelets sessile and 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 orbicular, dorsally compressed, compressed strongly, plano-convex, obtuse, 2.5–3.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, chartaceous, without keels, winged on margins, winged all along, 3-veined. Upper glume margins spinulose (and lacerate). Upper glume apex obtuse, mucronate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, chartaceous, winged on margins, 3-veined, spinulose on margins (and lacerate), obtuse, mucronate. Fertile lemma orbicular, gibbous, 2–3 mm long, indurate, without keel. Lemma surface granulose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, orbicular, flattened, plano-convex, 1.5 mm long. Embryo 0.5 length of caryopsis.

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia, Pacific, North America, South America.

Country /Province /State. China, Eastern Asia. Nansei-Shoto, Taiwan. **Papuasias.** Solomon Is (*). **Southwestern Pacific, Northwestern Pacific, North-central Pacific.** Tonga (*), Vanuatu (*). Marianas (*), Marshall Is (*). Hawaii (*). **Southeastern USA, Mexico.** Florida. Central Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Belize, Guatemala, Panama. Bahamas, Bermuda, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago. Guyana. Colombia. Brazil Northeast, Brazil North, Brazil Southeast.

TDWG4. Bahia, Maranhao, Piaui. Mexico State. Campeche, Quintana Roo, Yucatan.

Paspalum flaccidum Nees. *Agrost. Bras.* 48. (1829).

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: IT: *F. Sellow*, Brazil: Brasilia (LE-TRIN-0460.01). Possible type.. HT: *F. Sellow 1233*, no date, Brazil (B; IT: BAA-2144 (fragm. ex B), K, US-952278 (fragm. and photo ex B)).

Recent Synonyms: *Paspalum vescum* Nees, *Agrost. Bras.* 48 (1829).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1033, Fig 201).

Derivation (Clifford & Bostock 2007): L. unable to support its own weight. Inflorescence branches long and thin and so droop.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 45–60 cm long. Lateral branches lacking. Leaf-sheaths hirsute, outer margin hairy. Ligule an eciliate membrane, pubescent on abaxial surface, truncate. Leaf-blades filiform, 20–25 cm long, 0.75 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 1–6, single or paired or digitate, unilateral, 3.75–5 cm long. Rhachis angular, 0.5 mm wide. Spikelet packing abaxial. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, obtuse, 2–2.5 mm long, 1.6–1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, acute. Fertile lemma ovate, 2–2.5 mm long, indurate, pallid, without keel. Lemma surface striate, pubescent, hairy at base. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Mato Grosso, Goias, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Paspalum flavum J. & C. Presl. *Rel. Haenk.* i. 220. (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Bertero s.n.*, Chile: without locality (PR (photo); IT: US-2855336 (fragm. and photo)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. yellow. Spikelets straw-colored.

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

Habit, Vegetative Morphology. Annual. Culms 20–60 cm long. Lateral branches ample, arising from lower culm. Ligule an eciliate membrane. Leaf-blades lanceolate, 5–10 cm long, 5–10 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, arcuate, unilateral, 0.8–1.8 cm long. Central inflorescence axis 5–18 cm long. Rhachis 0.5–1 mm wide. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 2–2.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, wider than lemma (and loose), membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, acute. Fertile lemma oblong, 1.5–1.8 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Peru. Chile North.

Paspalum floridanum Michx. *Fl. Bor. Am.* i. 44. (1803).

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 USA. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: A. Michaux 5, no date, USA: Florida (P-MICHX; IT: US-2855337 (fragm. ex P-MICHX & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003), F.W.Gould, *The Grasses of Texas* (1975) (514, Fig. 270 as var. *glabratum*).

Derivation (Clifford & Bostock 2007): L.-ana, indicating location. From Florida State, USA.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms 100–200 cm long. Leaf-sheaths glabrous on surface or hirsute. Ligule an eciliate membrane. Leaf-blades flat or conduplicate, 15–50 cm long, 4–10 mm wide. Leaf-blade surface glabrous or hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, borne along a central axis, unilateral, 4–13 cm long. Central inflorescence axis 1–4 cm long. Rhachis narrowly winged, angular. Spikelet packing 4- rowed. Spikelets in pairs. 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 orbicular, dorsally compressed, plano-convex, obtuse, 3.6–4.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic, gibbous, 3.6–4.8 mm long, indurate, light brown, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. North-central USA, Northeast USA, South-central USA, Southeastern USA. Kansas, Missouri, Oklahoma. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia.

Paspalum foliiforme S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 501 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya petrosa*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya petrosa*).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum petrosus* Trin. *Sp. Gram.* 3(24): , t. 280 (1829–1830). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: doubtful type material: J.B.E. Pohl 3412, no date, Brazil (US-80908 (fragm.)). There is no evidence in the Trinius herbarium of a Pohl specimen, however, 1 of the three specimens there has no legible data on it. Döll mentions this specimen p. 296 vol. 2. HT: G.H. von Langsdorff s.n., Feb 1827, Brazil: m. Cuyaba (LE-TRIN-0833.01 (specimen & fig.); IT: US-80908 (fragm. ex LE)). Possible type. Possible type. Possible type.. ST: *Haenke*, Peru (LE-TRIN-0833.02). Possible type. Possible type. Possible type..

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (510, Fig 114 as *Thrasya petrosa*), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (as *Thrasya petrosa*), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (566, Fig 213 as *Thrasya petrosa*).

Illustrations (Journals): *Ruizia* (13:379 Fig 50e-f (1993) as *Thrasya petrosa*).

Derivation (Clifford & Bostock 2007): *L. folium*, leaf; *forma*, appearance. Inflorescence branches winged.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 100–150 cm long, 2–3 mm diam. Culm-internodes thin-walled. Culm-nodes pubescent. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades flat or revolute, 4–6 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, arcuate, unilateral, 12–28 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 4–5 mm wide, terminating in a barren extension, extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, 4.5–5.5 mm long, falling entire. Spikelet callus square, 0.5 mm long, pubescent.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.5–1.5 mm long, 0.1–0.3 length of spikelet, hyaline, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 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 elliptic, 1 length of spikelet, coriaceous, 4 -veined, sulcate or readily splitting into two halves, pilose, acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 3.5–4 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute, pubescent. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3, 1.8–2.2 mm long.

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

Country /Province /State. Mexico. Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil, Southern South America.** Costa Rica, Guatemala, Panama. Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast. Paraguay.

TDWG4. Chiapas.

Paspalum formosum Swallen. *Phytologia*, xiv. 379 (1967).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: A. Macedo 3171, 18 Feb 1951, Brazil: Minas Gerais (US-2014969).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. handsome*. Attractive in appearance.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 80–100 cm long. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs, inner surface glabrous. Ligule an eciliate membrane, 1–1.2 mm long. Leaf-blades flat or convolute, 18–49 cm long, 1–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 9–13, borne along a central axis, unilateral, 5.5–7.5 cm long. Rhachis 1 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, subacute, 2.5–3 mm long, 1.1–2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, 5 -veined, wrinkled, glabrous. Fertile lemma obovate, 2.5–3 mm long, 1.1–2 mm wide, indurate, dark brown, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Southeast, Brazil South. Goiás, Minas Gerais, Rio de Janeiro, Espírito Santo, Sao Paulo Parana.

Paspalum forsterianum Fluegge. *Gram. Monog.* 172. (1810).

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), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from New Caledonia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: OM: *Forster*, [15 Mar 1777], New Caledonia [sic, err. pro. Easter Island] (B, B, BM, BM, BM, K, LE, LE-TRIN-0538.01a (fragm. & ill.), S, S). *fide* D. Nicolson & F. R. Fosber (2003).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -anus, indicating connection. In honor of Johann Georg Adam Forster (1754–1794) German explorer and botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 40–50 cm long. Ligule an eciliate membrane, 2 mm long. Leaf-blades linear or lanceolate, 7–20 cm long, 5–13 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, unilateral, 4–6 cm long. Central inflorescence axis 3–6 cm long. Rhachis narrowly winged, angular, 1 mm wide. Spikelet packing irregular, 3–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.5 mm long or 1.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, plano-convex, obtuse, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblong, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic, gibbous, 2.5 mm long, indurate, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Southwestern Pacific, South-central Pacific. New Caledonia. Easter Is.

Paspalum foveolatum Mez. *Syn. Pl. Glumac.* 1: 22 (1855) [1853].

Regarded by K as a synonym (*P. melanospermum*).

TYPE from Guyana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Coll. Ukn. GUYANA NO. 6*, no date, Guyana (US-1126114 (fragm. ex CN)).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (216, Fig. 80).

Derivation (Clifford & Bostock 2007): L. *fovea*, pit; *-olus*, minute. *-atum*, possessing. Lower glume has a conspicuous circular depression.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms 40–80 cm long. Ligule an eciliate membrane. Leaf-blades 10–20 cm long, 5–9 mm wide, flaccid. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, borne along a central axis, unilateral, 5–8 cm long. Rhachis flattened. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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 orbicular, dorsally compressed, plano-convex, 1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, rugose, rough on flanks, puberulous, acute. Fertile lemma orbicular, 1.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Brazil Northeast.
TDWG4. Bahia.

Paspalum galapageium Chase. *Proc. Calif. Acad. Sc. Ser. IV.* xxi. 297 (1935).

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 Ecuador: Galapagos Islands. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *J.T. Howell 9612*, 30 May 1932, Ecuador: Galapagos Islands: Isla Isabela (CAS-211105; IT: US-1611608).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ium, indicating connection. From the Galapagos Islands.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 45–80 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface or puberulous, outer margin glabrous or hairy. Ligule an eciliate membrane, 2–4 mm long. Leaf-blades 15–25 cm long, 3–8 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pubescent, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 3–8, borne along a central axis, ascending or spreading, unilateral, 3–6.5 cm long. Rhachis wingless, angular, 0.6–0.8 mm wide, scabrous on margins. Raceme-bases pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, flattened, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, subacute, 2–2.8 mm long, 1.5–1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure or one to two the lower present in some spikelets, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined, obtuse. Fertile lemma elliptic, 2–2.3 mm long, 1.5 mm wide, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Cleistogenes absent or present, in lower sheaths.

Distribution (TDWG). Continent. South America.

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

Paspalum gardnerianum Nees. *Hook. Kew Journ.* ii. 103. (1850).

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>: *vide* TROPICOS and Kew Synonymy Database: ST: *G. Gardner 3510*, Brazil: Goiás (CGE; IST: US-2855737 (fragm.)). LT: *Gardner 3503*, Brazil: Goiás (CGE; ILT: K, US-2630371 (fragm. ex CGE)). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 230 (1929).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (204, Fig. 75), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (228, Fig. 172), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (493, Fig. 85).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of George Gardner (1812–49) Scots-born physician and botanist, sometime Director of Peradeniya Gardens, Sri Lanka.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths herbaceous, not bulbous or thickened and forming a bulb, villous. Culms erect, 45–100 cm long. Leaves basal and cauline. Ligule a fringe of hairs. Leaf-blades parallel-sided, 3–20 cm long, 3–8 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)3–7(–11), borne along a central axis, unilateral, 2.5–11 cm long. Central inflorescence axis 2–15 cm long. Rhachis narrowly winged, angular, 0.5–0.7 mm wide. Spikelet packing abaxial, regular, 2–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled, 1–2 in the cluster, on shorter pedicels than sterile. Companion sterile spikelets pedicelled, 0–1 in the cluster. Pedicels present, oblong, setose, hairy at tip, with 1.5–2 mm long hairs.

Sterile Spikelets. Companion sterile spikelets rudimentary (when 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, plano-convex, obtuse, 1.3–2.2 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, 2–3 -veined, glabrous or pilose, obtuse. Fertile lemma orbicular, gibbous, 1.3–2.2 mm long, indurate, pallid or dark brown, without keel. Lemma surface granulose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

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

TDWG4. Roraima, Mato Grosso, Goias, Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana.

Paspalum geminiflorum Steud. *Syn. Pl. Gram.* 25 (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 Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Claussen 1021*, no date, Brazil: without locality (P; IT: US-2855777).

Recent Synonyms: *Paspalum reticulatum* Hack., *Oesterr. Bot. Zeitschr.* 1901, 199. (1901).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. gemini, twins; flos, flower. Spikelets in pairs on a common peduncle.

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

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Culms erect, 80–100 cm long, 5–6 -noded. Lateral branches lacking. Leaf-sheaths glabrous on surface or pubescent. Ligule an eciliate membrane, truncate. Leaf-blades linear or lanceolate, 10–20 cm long, 3–6 mm wide, stiff. Leaf-blade surface scaberulous, rough adaxially, glabrous or hirsute, hairy adaxially. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–4, single or paired or borne along a central axis, arcuate, unilateral, 4–6 cm long. Central inflorescence axis 4–6 cm long. Rhachis angular. Spikelet packing irregular, 3–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 0.1–0.25 length of fertile spikelet, scaberulous.

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, plano-convex, obtuse, 3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, wrinkled, acute. Fertile lemma ovate, 3 mm long, indurate, light brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mato Grosso, Goias, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum gemmosum Chase ex Renvoize. *Kew Bull.*, 27(3): 454 (1972).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 11475*, 20 Mar 1930–22 Mar 1930, Brazil. Goiás: vicinity of Goyaz (US-1500007; IT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. gemma, jewel; -osum, well developed. Origin not given by the author but possibly a reference to the papillose upper lemma resembling a jewel.

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

Habit, Vegetative Morphology. Annual. Culms erect, 45–55 cm long. Leaf-sheaths pilose. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades linear or lanceolate, 5–15 cm long, 5–13 mm wide. Leaf-blade surface pilose, densely hairy, hairy on both sides. Leaf-blade apex acuminate or attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–9, borne along a central axis, deflexed, unilateral, 1.5–6 cm long. Rhachis angular, 0.5–0.75 mm wide. Spikelet packing lax, 1–2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma, dull. Upper glume ovate, 0.1–0.15 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pilose, acute. Fertile lemma elliptic, 1.5 mm long, indurate, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate. Palea surface papillose.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast. Mato Grosso, Goias, Bahia.

Paspalum giganteum Baldw. ex Vasey. *Bull. Torrey Bot. Club*, xiii. 166 (1886).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: A. H. Curtiss s.n., 1875, USA: E. Florida, Pablo Creek (US-929927). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 195 (1929).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. very large. Culms tall compared with those of related species.

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

Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes short, scaly. Culms robust, 150–200 cm long, 4–8 mm diam. Lateral branches lacking. Leaves basal and cauline. Leaf-sheaths without keel, glabrous on surface to pilose, with tubercle-based hairs. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 30–60 cm long, 10–23 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins glabrous or ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, borne along a central axis, unilateral, 10–20 cm long. Rhachis wingless, angular, 1.5 mm wide, scabrous on margins. Spikelet packing crowded. Raceme-bases brief, hirsute. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, obtuse, 3–3.8 mm long, 2.5–3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, light brown, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, light brown, 5 -veined, obtuse. Fertile lemma obovate, 3–3.8 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southeastern USA. Florida.

Paspalum glabrinode (Hack.) O. Morrone & F. Zuloaga. *Darwiniana*, 29: 262: (1989).

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. **Basionym or Replaced Name:** *Panicum glabrinode* Hack., *Annuaire Conserv. Jard. Bot. Geneve* 17: 284–285 (1914). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Stuckert 22501 ex Lillo 12340*, 14 Jan 1913, Argentina: Misiones: Santa Ana (W; IT: BA, BAA, BAF, LIL,

SI, US-1817349 [Rodriguez 721], US-80753 (fragm. ex W)). [Rodriguez 721, with same coll. data, may be a PT or collected for Lillo].

Recent Synonyms: *Paspalum concavum* S.A. Renvoize, *Kew Bull.* 42(4): 921 (1987).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. glaber*, smooth; nodus, knot. Nodes glabrous.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 100–200 cm long. Culm-internodes 11–17 cm long. Culm-nodes glabrous. Leaf-sheaths 13–25 cm long, longer than adjacent culm internode, hispid, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1–1.7 mm long, truncate. Collar pubescent. Leaf-blade base cordate. Leaf-blades 37–60 cm long, 10–15 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface hispid, hairy on both sides. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, bracteate at branch bases. Racemes numerous, 12–40, borne along a central axis, unilateral, 2–7.5 cm long. Central inflorescence axis 14–25 cm long, hispid. Rhachis narrowly winged, angular, 0.6–1 mm wide, glabrous on surface or pilose on surface, glabrous on margins or ciliate on margins. Spikelet packing 4 -rowed. Raceme-bases pubescent. Spikelets in pairs. Fertile spikelets sessile and pedicelled. Pedicels present, scaberulous, bearing a few hairs or 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 elliptic, dorsally compressed, concavo-convex, 2.4–3.3 mm long, 0.9–1.1 mm wide, falling entire.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume heteromorphic ovate or lanceolate, 0.2–0.5 mm long or 1.2–2.1 mm long, membranous, 0 -veined or 1 -veined. Upper glume ovate, 2.1–2.4 mm long, 0.75–0.9 length of spikelet, membranous, 3–5 -veined. Upper glume primary vein distinct, scabrous. Upper glume surface glabrous or pubescent, hairy above. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret ovate, 2.2–3.2 mm long, 0.9 length of spikelet, membranous, 5 -veined, with evident midvein, concave across back, scabrous, rough on midvein, obtuse. Fertile lemma elliptic, 2.5–2.9 mm long, 1 mm wide, indurate, yellow, without keel, 5 -veined, more than 3-veined. Lemma surface papillose, rough in lines. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2–1.5 mm long, purple.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central. Paraguay.

TDWG4. Chaco, Misiones.

***Paspalum glaucescens* Hack. *Oest. Bot. Zeitschr.* 51:237 (1901).**

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: *A.F.M. Glaziou 20130*, 9 May 1892, Brazil: Minas Gerais (W; IT: K, P, US-2855323 (fragm.)).

Recent Synonyms: *Paspalum yaguaronense* Henr., Fedde, *Repert.* 18: 238 (1922).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. glaucesco*, become glaucous. Foliage and/or other parts bluish-green.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 45–90 cm long, 3–4 -noded. Culm-nodes glabrous. Lateral branches lacking. Ligule an eciliate membrane, 2–3 mm long, obtuse. Leaf-blade base tapering to the midrib. Leaf-blades linear or lanceolate, 15–25 cm long, 4–8 mm wide, stiff, glaucous. Leaf-blade surface scaberulous. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 3, borne along a central axis, unilateral, 5–10 cm long. Central inflorescence axis 5–10 cm long. Rhachis angular, scabrous on margins. Spikelet packing lax, irregular, 3 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, obtuse, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, purple, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, purple, 5 -veined, obtuse. Fertile lemma ovate, 2.5 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil North, Brazil Southeast, Brazil South. Paraguay, Uruguay.

TDWG4. Mato Grosso, Goias, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Corrientes, Formosa, Misiones.

Paspalum glaziovii (A.G.Burman) S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 503 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya glaziovii* A.G.Burman, *Brittonia*, 34(4): 460 (1982).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Auguste Francois Marie Glaziou (1828–1906) French-born artist and Brazilian botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–70 cm long. Culm-nodes bearded. Leaf-sheaths keeled, pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1.5 mm long, erose. Leaf-blades lanceolate, 8–15 cm long, 1.5–4 mm wide. Leaf-blade surface pubescent or pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, arcuate, unilateral, 8–13 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 3–4 mm wide, pilose on surface, tuberculate on margins, ciliate on margins, terminating in a barren extension, extension flattened. Rhachis hairs white. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, 2.7 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.6 mm long, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 2.5 mm long, 1 length of adjacent fertile lemma, 0.9 length of spikelet, membranous, thinner along midline, without keels, 2 -veined. Upper glume primary vein absent. Upper glume surface glabrous or pilose, hairy above. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, coriaceous, sulcate or readily splitting into two halves, eciliate on midvein or pubescent on midvein, ciliate on margins (above), acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 2.5 mm long, coriaceous, pallid or purple, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

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

TDWG4.

Paspalum glumaceum Clayton. *Kew Bull.*, 30(1): 104 (1975).

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>: *vide* TROPICOS and Kew Synonymy Database: Zambia: Mpika Dist.: Mfuwe, *Astle 5458* (HT: K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):92, t. 22).

Derivation (Clifford & Bostock 2007): L. gluma, husk; -acea, belonging to. Glumes conspicuous.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 30–100 cm long. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 8–30 cm long, 8–19 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or borne along a central axis, unilateral, 2–11 cm long. Central inflorescence axis 0.5–6 cm long. Rhachis broadly winged, with sharp-edged

midrib, 1.5–2 mm wide. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary or in pairs. 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 orbicular, dorsally compressed, plano-convex, obtuse, (2.5–)2.8–3.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.5–1.5 mm long, 0.2–0.5 length of spikelet, membranous. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, chartaceous, without keels, 5 -veined. Upper glume surface glabrous or pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, chartaceous, 3 -veined, glabrous or pubescent, obtuse. Fertile lemma ovate, gibbous, 2–3 mm long, indurate, dark brown, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa, South tropical Africa, Western Indian ocean. Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania, Uganda. Malawi, Zambia, Zimbabwe. Madagascar.

Paspalum goyanum Swallen. *Phytologia*, xiv. 376 (1967).

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

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 11733*, 3 Apr 1930, Brazil: Goias (US-1501446).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. -anum*, indicating connection. From Goyaz Province, Brazil.

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

Habit, Vegetative Morphology. Perennial. Culms erect, slender, 110 cm long. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 2.5–3 mm long, brown. Leaf-blades curled or flexuous, 15–30 cm long, 0.5–1.5 mm wide. Leaf-blade surface glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, ascending, unilateral, 9–11 cm long. Rhachis angular, 0.6 mm wide, puberulous on surface, glabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.5–1 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, 2.3–2.5 mm long, 1.3–1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, with conspicuous midvein, glabrous, obtuse. Fertile lemma elliptic, 2.3–2.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum goyasense Davidse, Morrone, Zuloaga. *Novon* 11(4): 391 (2001).

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: *H.S. Irwin, R. Souza & R. Reis dos Santos 10524*, 19 Nov 1965, Brazil: Goias (MO; IT: US-2529124).

Illustrations (Journals): *Novon* (11: 392 Fig.2 (2001)).

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

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

Habit, Vegetative Morphology. Perennial, herbaceous, or if woody then not a bamboo, caespitose. Culms erect, 40–65 cm long, 1 mm diam., 2–3 -noded. Culm-internodes 6–20 cm long, distally glabrous. Culm-nodes brown, pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths 3–10 cm long, pilose, with

tubercle-based hairs. Ligule an eciliate membrane, 0.5–0.9 mm long, brown. Collar pilose. Leaf-blades 8–20 cm long, 2–4 mm wide, stiff. Leaf-blade surface pilose, densely hairy, hairy abaxially, with tubercle-based hairs. Leaf-blade margins ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes, bracteate at branch bases. Peduncle 15–30 cm long. Racemes 2, paired, unilateral, 2–7 cm long. Central inflorescence axis 0–3 cm long. Rhachis broadly winged, 1–1.6 mm wide. Spikelet packing abaxial, 2 -rowed. Raceme-bases glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 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 elliptic, dorsally compressed, plano-convex, acute, 4–5 mm long, 1–1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface hirsute, hairy below. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3–5 -veined, hirsute, hairy below, obtuse. Fertile lemma elliptic, gibbous, 3.2–4 mm long, 0.9 mm wide, cartilaginous, without keel. Lemma surface papillose. Lemma margins flat. Lemma apex pubescent. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.3 mm long. Anthers 3, 2 mm long. Caryopsis with adherent pericarp, obovoid, 2 mm long. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

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

Paspalum graciellae Sulekic. *Darwiniana* 44 (1): 127–129, f. 1 (2006).

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina: Salta: Dpto. Chicoana, Quebrada de Escoipe, 1600 m, 28 Jan 2001, *Sulekic, Cano & L. Villagrán 3123* (HT: SI; IT: MCNS, SI, Herb. Sulekic).

Illustrations (Journals): *Darwiniana* (44: 128, Fig.1 (2006)).

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly. Culms erect or geniculately ascending, 70–130 cm long. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface or pilose, outer margin glabrous. Ligule an eciliate membrane, 2.2–3 mm long, brown, truncate or obtuse. Leaf-blades lanceolate, 4–20 cm long, 3–13 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy abaxially. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–3, borne along a central axis, ascending, unilateral, 6–8.5 cm long. Central inflorescence axis 2.5–7.5 cm long. Rhachis broadly winged, membranous, 3.7–4.2 mm wide, light-coloured (green & purple). Spikelet packing abaxial. Spikelets solitary or in pairs. Fertile spikelets pedicelled, the lower smaller. Pedicels present, oblong, 0.5 mm long, 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, dorsally compressed, plano-convex, 3–4.2 mm long, 1–1.6 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose, hairy below. Upper glume margins villous. Upper glume hairs 2–4 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, scabrous, rough above, pilose, hairy at base, villous on margins, bearing hairs 1–2.5 mm long, acute. Fertile lemma elliptic, 2.6–3.4 mm long, 1–1.3 mm wide, coriaceous, pallid, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma margins involute. Palea involute, coriaceous. Palea surface glabrous.

Flower and Fruit. Lodicules 2, 0.3 mm long, membranous, truncate. Anthers 3, 2–2.5 mm long, purple. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Salta.

Paspalum graniticum (A.G.Burman) S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 503 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya granitica* A.G.Burman, *Brittonia*, 32(2): 219 (1980).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): English granite. *L. icum*, belonging to. Growing on granitic soils.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending or decumbent, 30–60 cm long. Culm-nodes glabrous. Leaf-sheaths keeled, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1.5 mm long, pilose on abaxial surface. Leaf-blades 3.5–10 cm long, 4 mm wide. Leaf-blade surface puberulous, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, arcuate, unilateral, 5–7 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 1 mm wide, glabrous on surface, scabrous on margins or tuberculate on margins, glabrous on margins or ciliate on margins, terminating in a barren extension, extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly, 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 elliptic or oblong, dorsally compressed, acute, 2.4–2.6 mm long, 0.7 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.2 mm long, 0.1 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 0.8 length of spikelet, membranous, without keels, 7 -veined. Upper glume lateral veins without cross-veins or transversely connected at apex. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 1 length of spikelet, coriaceous, sulcate, papillose, obtuse. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 2.1 mm long, coriaceous, without keel. Lemma surface papillose or striate. Lemma margins involute. Lemma apex acute, without ornament. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

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

Paspalum guaraniticum L. Parodi. *Not. Mus. La Plata, Bot.* 2 :101 (1937).

Regarded by K as a synonym (*P. ionanthum*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L.R. Parodi 12140*, 14 Nov 1934, Argentina: Corrientes, Chavarría (BAA; IT: US-1721272).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (381, Fig. 158).

Derivation (Clifford & Bostock 2007): *L. -icum*, belonging to. From the land of the Guarani in Argentina.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 50–100 cm long, 3 -noded. Culm-nodes black, glabrous or pubescent. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1.5 mm long, brown. Leaf-blade base tapering to the midrib. Leaf-blades flat or involute, 15–35 cm long, 1–6 mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 10–12 cm long. Central inflorescence axis 0 cm long. Rhachis narrowly winged, flattened, 1.3–1.4 mm wide, ciliate on margins. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, 4–5 mm long, 2–2.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume margins scaberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma ovate, 3.8–4 mm long, 1.5 mm wide, indurate, pallid, without keel. Lemma surface asperulous. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

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

TDWG4. Catarina, Rio Grande do Sul. Entre Rios.

Paspalum guaricense Swallen. *Phytologia*, xiv. 378 (1967).

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: HT: *H. Pittier 12520*, 11 Sep 1927, Venezuela: Guárico: in humid places, El Dividive (US-1343986; IT: MO-941986).

Illustrations (Books): No illustration found (BKS).

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

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

Habit, Vegetative Morphology. Annual. Culms erect, slender, 55–75 cm long. Lateral branches ample, arising from lower culm. Leaf-sheaths longer than adjacent culm internode, keeled, hirsute. Ligule an eciliate membrane, 3 mm long. Leaf-blades conduplicate, 15–20 cm long, 4–7 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 4–7, borne along a central axis, unilateral, 3–6 cm long. Central inflorescence axis 6 cm long. Rhachis narrowly winged, angular, 1 mm wide, tuberculate on margins, villous on margins. Rhachis hairs 4 mm long. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, obtuse, 1.8–1.9 mm long, 1.3–1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, dark brown, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, dark brown, 3 -veined, obtuse. Fertile lemma obovate, 1.8 mm long, indurate, dark brown, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum guayanerum Beetle. *Phytologia*, 35(3): 22 (1977).

Accepted by: 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: Sinaloa: between Mazatlan and Durango, rocky cliff face near La Guayanera, 6 Jan. 1975, A.A. Beetle M-3669 (HT: not designated).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): From La Guayanera, Sinaloa State, Mexico.

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

Habit, Vegetative Morphology. Annual. Culms 20–40 cm long. Leaf-sheaths hirsute. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades 10–20 cm long, 2–3 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–9, borne along a central axis, arcuate, unilateral, 0.5–0.8 cm long. Rhachis broadly winged, foliaceous, 0.5 mm wide, hirsute on surface, terminating in a barren extension. Spikelet packing abaxial, 1 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 1 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, glabrous, acute. Fertile lemma elliptic, 1 mm long, indurate, light brown, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Northwest Mexico, Southwest Mexico.

TDWG4. Sinaloa, Sonora. Nayarit.

Paspalum guenoarum Arechav. *Anal. Mus. nac. Montevid.* i. 56. (1894).

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 Uruguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Arechavaleta s.n.*, Feb 1891, Uruguay: Soriano (MVM; IT: SI, US-950750).

Recent Synonyms: *Paspalum rhodopedum* L.B.Sm. & Washh., *Bradea* 2(35): 247 (1978). *Paspalum rojasii* Hack.Fedde, *Repert. Nov. Sp.* 7: 369 (1909).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (979, Fig. 193 as *P. rhodopedum* & 983, Fig 194 as var. *guenoarum*).

Derivation (Clifford & Bostock 2007): In honor of the Guenoas, a people who lived on Isla Vizcaino, Uruguay.

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

Habit, Vegetative Morphology. Perennial. Rhizomes absent or short. Culms 80–200 cm long, 3–4 -noded. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 20–40 cm long, 6–18 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–13, borne along a central axis, unilateral, 7–17 cm long. Rhachis angular. Spikelet packing 2–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, 3–3.5 mm long, 2–2.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface glabrous or pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, 3–5 -veined, wrinkled, obtuse. Fertile lemma ovate, 2.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS), or 40 (5 refs TROPICOS).

Distribution (TDWG). Continent. South America.

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

TDWG4. Mato Grosso, Goias, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Tucuman. Chaco, Corrientes, Entre Rios, Misiones.

Paspalum guttatum Trin. *Gram. Panic.* 91. (1826).

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.H. von Langsdorff s.n.*, Nov. 1824, Brazil: Barro do Jequitiba: in campis glareosis (LE-TRIN-0468.02 (& fig.); IT: US-2855317 (fragm. ex LE)). IT: Dec. 1824, Brazil: S[erra]da Lapa: in campis glareosis (LE-TRIN-0468.01).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (91: 241: Fig.7 (2004)).

Derivation (Clifford & Bostock 2007): *L. gutta*, spot; -atum, possessing. Sterile lemma with red spots.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 30–80 cm long. Culm-nodes glabrous. Lateral

branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface or pilose. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades flat or involute, 15–50 cm long, 2–4 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Peduncle tipped by a glumaceous appendage. Racemes 1–3, single or paired or digitate, unilateral, 3–11 cm long. Rhachis narrowly winged (irregularly dentate), flattened, 1–1.5 mm wide. Spikelet packing abaxial, irregular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 4.5 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface villous, with tubercle-based hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9 length of spikelet, membranous, thicker on margins, 5 -veined, villous, with tubercle-based hairs, acute. Fertile lemma elliptic, 3.5 mm long, indurate, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Goias, Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum haenkeanum J. & C. Presl. *Rel. Haenk.* i. 210. (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Haenke s.n.*, s.d., Peru (PR; IT: BM, MO-2798801, US-951751, W).

Illustrations (Journals): *Ruizia* (13:375 Fig 49k-m (1993)).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Thaddaeus Peregrinus Xaverius Haenke (1761–1816), Bohemian botanist who travelled widely in the Pacific.

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 40–80 cm long. Culm-nodes glabrous. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 3–8.5 cm long, 3–9 mm wide. Leaf-blade surface pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, digitate, unilateral, 2.5–4 cm long. Rhachis narrowly winged, glabrous on surface. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or orbicular, dorsally compressed, plano-convex, 1.8–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, 1.8–2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum hallasanense Y.N.Lee. *Bull. Korea Pl. Res.* 7: 10 (2007).

TYPE from South Korea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Korea, Jeju-do: Lee Yong No.

Illustrations (Books): No illustration found (BKS).

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

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 35 cm long. Leaf-sheaths 4 cm long, glabrous on surface. Ligule an eciliate membrane, 1.5 mm long. Leaf-blades lanceolate, 10–13 cm long, 3 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–3), paired, unilateral, 2–6 cm long. Rhachis narrowly winged, angular. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, turgidly plano-convex, 1.7 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblong, 1.7 mm long, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 5–7 -veined. Fertile lemma ovate, gibbous, 1.7 mm long, coriaceous, purple, without keel. Lemma margins involute. Palea involute, coriaceous.

Flower and Fruit. Lodicules 2, truncate. Anthers 3, purple. Caryopsis with adherent pericarp, ellipsoid, 1.4 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Eastern Asia. Korea.

Paspalum hartwegianum Fourn. *Mex. Pl. Enum., Gram.* 12 (1886).

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>: *vide* TROPICOS and Kew Synonymy Database: LT: *K.T. Hartweg 245*, no date, Mexico: Guanajuato: ad fossas prope León (P; ILT: B, US-928960 (fragm. ex P), W).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (598).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (97: 21, Fig.5 (2010)).

Derivation (Clifford & Bostock 2007): L. -anum, indicating origin. In honor of Carl Theodor Hartweg (1812–1871) German botanical explorer.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, 40–80 cm long, without nodal roots or rooting from lower nodes. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades linear, conduplicate or involute, 10–35 cm long, 2–6 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 4–7, borne along a central axis, unilateral, 2–9 cm long. Central inflorescence axis 1–5 cm long. Rhachis narrowly winged, angular, 1–1.5 mm wide. Spikelet packing 4 -rowed. Spikelets in pairs. 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, dorsally compressed, plano-convex, acute, 3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic, gibbous, 3 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

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

TDWG4. Morelos. Guanajuato, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Sonora. Guerrero, Jalisco, Michoacan, Oaxaca. Yucatan.

Paspalum hatsbachii Zuloaga, Morrone. *Hickenia* 3(22): 77 (2000).

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: *Hatschbach* 32465, 29 Mar 1973, Brazil. Mato Grosso do Sul: Mun. Rio Verde de Mato Grosso, Fda. Capão da Taquara (K; IT: MBM).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Gert Hatschbach (1923-) Brazilian botanist.

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

Habit, Vegetative Morphology. Perennial, herbaceous, or if woody then not a bamboo, caespitose. Rhizomes short. Culms 65–120 cm long, 2–3 -noded. Culm-internodes 15–25 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths 4–6 cm long, striately veined, hirsute. Ligule an eciliate membrane, 1–1.2 mm long, brown. Leaf-blades lanceolate, 28–32 cm long, 9–11 mm wide. Leaf-blade surface hispid, sparsely hairy, hairy on both sides. Leaf-blade margins cartilaginous, ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, without bracts or bracteate at branch bases. Peduncle 30–60 cm long, glabrous. Racemes 2, single, unilateral, 6–8 cm long. Rhachis broadly winged, 1.2–2 mm wide. Spikelet packing abaxial. Raceme-bases pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–0.7 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, acute, 5.9–6.4 mm long, 2.1–2.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface hirsute. Upper glume hairs red, 2.5 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, glabrous, obtuse. Fertile lemma elliptic, gibbous, 5.4–6 mm long, 1.8–2.1 mm wide, indurate, yellow, without keel, 5 -veined, more than 3-veined. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.7 mm long. Anthers 3, 3.5–4.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum haumanii Parodi. *Com. Mus. Nac. Buenos Aires*, ii. 217 (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 Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L.R. Parodi* 4930, 14 Jan 1923, Argentina: Chana Mini (BAA; IT: B, US-1162017).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (404, Fig. 169), B.Rosengurt, *Gramineas Uruguayas I* (1970) (366, Fig. 158 as var. *macranthum* & var. *pilosum*).

Derivation (Clifford & Bostock 2007): In honor of Lucien Leon Hauman, also Hauman-Merck (1880–1965) Belgian botanist who collected in Africa and South America.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Basal innovations intravaginal. Culms erect, robust, 250–300 cm long, 8–10 mm diam., 5–6 -noded. Culm-internodes thin-walled. Culm-nodes glabrous. Leaves without demarcation between sheath and blade. Leaf-sheaths 70–80 cm long, without keel, glabrous on surface. Ligule an eciliate membrane, 1.5 mm long. Leaf-blades 100–150 cm long, 12–14 mm wide. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 60–100, borne along a central axis, unilateral, 4–10 cm long. Central inflorescence axis 20–60 cm long. Rhachis wingless, angular, 1–1.5 mm wide. Spikelet packing irregular, 4–6 -rowed. Spikelets in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, acute, 3.5–4 mm long, 1.4–1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 3.5–4 mm long, 1.4–1.6 length of adjacent fertile lemma, 1 length of spikelet, membranous, red, without keels, 3 -veined. Upper glume surface puberulous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 3.5–4 mm long, 1.4–1.6 length of fertile lemma, 1 length of spikelet, membranous, red, 3 -veined, pubescent. Fertile lemma elliptic, 2.5 mm long, indurate, pallid or yellow, shiny, without keel. Lemma surface punctate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Sao Paulo Parana, Catarina, Rio Grande do Sul. Buenos Aires, Chaco, Corrientes, Entre Rios, Misiones, Santa Fe.

Paspalum heterotrichon Trin. *Sp. Gram.* Ic. iii. t. 285. (1831).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *G.H. von Langsdorff s.n. [1829]*, 1829, Brazil: absque loco (LE-TRIN-0470.02 (& fig.); IT: K (photo, SI), US-2855297 (fragm ex LE)). OM: *Langsdorff 1060*, Brazil (LE).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (198, Fig. 124).

Illustrations (Journals): *Ruizia* (13:352, Fig 44e-g (1993)).

Derivation (Clifford & Bostock 2007): Gk. heteros, different; thrix, hair. Glumes and sterile lemma bear hairs of various lengths.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms leaning, slender, 50–90 cm long, wiry. Culm-nodes bearded. Lateral branches ample or fastigiate, arising from mid culm or upper culm. Leaves cauline. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs bearded, 4–5 mm long. Ligule an eciliate membrane. Collar pubescent. Leaf-blades flat or involute, 5–15 cm long, 2–3.5 mm wide. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade apex acuminate, filiform.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–7, borne along a central axis, unilateral, 1–6 cm long. Rhachis broadly winged, membranous, 3–4 mm wide, light-coloured (yellow), terminating in a barren extension, extension flattened. Spikelet packing abaxial. Raceme-bases brief, hirsute. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 2.5 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, hyaline, without keels, 3 -veined. Upper glume surface villous, hairy at base, with marginal tufts of hair (single 2–3mm hair). Upper glume margins ciliate. Upper glume hairs white, 1–2 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, sulcate, ciliate on margins, fringed above. Fertile lemma lanceolate or elliptic, 1.7 mm long, 0.6 mm wide, coriaceous, without keel. Lemma margins involute. Palea involute, coriaceous.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Honduras, Panama. Dominican Republic, Haiti. Venezuela. Colombia, Peru. Brazil West Central, Brazil Southeast.

Goiás. Chiapas.

Paspalum hintonii Chase. *Journ. Wash. Acad. Sc.* xxvii. 143. (1937).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *G.B. Hinton 1807*, 22 Sep 1932, Mexico: México: Temascaltepec Distr.: Vigas, 1080 m (US; IT: TEX).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 504: Fig.18 (2005)).

Derivation (Clifford & Bostock 2007): in honor of George Bode Hinton (1882–1943) United States botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–60 cm long. Leaf-sheaths pubescent. Ligule an eciliate membrane, 1 mm long, brown, ciliate from base of abaxial surface. Leaf-blades 8–15 cm long, 3–5 mm wide.

Inflorescence. Inflorescence composed of racemes, with 1–2 peduncles per sheath. Racemes 1, single, arcuate, unilateral, 5–9 cm long. Rhachis 1 mm wide. Spikelet packing crowded. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, 2–2.3 mm long, 1.2–1.5 mm wide, falling entire.

Glumes. Glumes one to two the lower present in some spikelets, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.4 mm long, 0.2 length of spikelet. Upper glume elliptic, 1–1.5 mm long, 0.33–0.66 length of spikelet, membranous, without keels.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous. Fertile lemma elliptic, 2–2.3 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Southwest Mexico.

TDWG4. Mexico State. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca.

Paspalum hirsutum Retz. *Obs. Bot.* ii. 7 (1781).

Accepted by: S-L Chen et al, *Flora of China* 22 (Poaceae) (2006).

TYPE from Taiwan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Taiwan?.; *Bladh s.n.* (HT: Lund, Sweden).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 738).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms slender, 20–40 cm long. Culm-internodes distally pubescent or pilose (tomentose). Leaf-sheaths mostly shorter than adjacent culm internode, hirsute. Ligule an eciliate membrane, 2 mm long. Leaf-blade base simple. Leaf-blades lanceolate, 5–18 cm long, 3–5 mm wide. Leaf-blade surface hirsute, densely hairy, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle pubescent above (tomentose) or pilose above. Racemes 2–4, paired or digitate or borne along a central axis, 2–3 cm long. Central inflorescence axis 1–2 cm long. Rhachis narrowly winged, flattened, 1.5 mm wide. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate, with white hairs (soft).

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 (broadly), dorsally compressed, subacute, 2–2.3 mm long, falling entire. Spikelet callus glabrous.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets. Upper glume elliptic, 1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume margins eciliate or pubescent (minutely).

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic (broadly) or orbicular, 5–7 -veined, glabrous, acute. Fertile lemma elliptic (broadly) or orbicular, cartilaginous, light brown, dull, without keel. Lemma surface finely striate and punctate. Lemma apex obtuse.

Distribution (TDWG). Continent. Temperate Asia, South America.

Country /Province /State. China, Eastern Asia. China Southeast. Taiwan. **Western South America.** Colombia.

TDWG4. Guangdong, Guangxi.

Paspalum hirtum H. B. & K. *Nov. Gen. et Sp.* i. 89. (1815).

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: *F.W.H.A. von Humboldt & A.J.A. Bonpland s.n.*, Sep-Oct, Colombia: Tolima: Ibagué, Mesa de Cuello, entre Melgar y Espinal (P-Bonpl.; IT: B, US-2855302 (fragm. ex P-Bonpl. , B & photo)).

Illustrations (Books): No illustration found (BKS).

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

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes elongated. Culms geniculately ascending, 4–30 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 1–8 cm long, 1–6 mm wide. Leaf-blade surface glabrous or hirsute. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, borne along a central axis, unilateral, 1–2 cm long. Central inflorescence axis 1–2 cm long. Rhachis narrowly winged, angular, 0.75 mm wide, drab. Spikelet packing abaxial, 2-rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, subacute, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3-veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3-veined, acute. Fertile lemma elliptic, 3 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum hispidum Swallen. *Contrib. U. S. Nat. Herb.* xxix. 414 (1950).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.A. Steyermark 49670*, 27 Jul 1942, Guatemala: Huehuetenango, along Rio Amelco, Sierra de los Cuchumatanes below Finca San Rafael (US-1935050).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. bearing coarse stiff hairs. Plant wholly or partly rough to the touch.

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

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 45–55 cm long. Culm-internodes distally glabrous. Culm-nodes bearded. Lateral branches ample. Leaf-sheaths longer than adjacent culm internode, keeled. Ligule an eciliate membrane, 2 mm long, brown. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 10–15 cm long, 10–18 mm wide. Leaf-blade surface hispid, sparsely hairy or moderately hairy or densely hairy, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 9, borne along a central axis, unilateral, 6–9 cm long. Central inflorescence axis 8 cm long. Rhachis wingless, angular, 1 mm wide, scabrous on margins. Raceme-bases brief, pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 2.3–2.4 mm long, 1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3-veined. Upper glume surface pilose. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3-veined, glabrous or pilose, acute. Fertile lemma elliptic, 2 mm long, indurate, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse or acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.
Country /Province /State. Mesoamerica. Guatemala.

Paspalum hitchcockii Chase. *Contrib. U. S. Nat. Herb.* xxviii. 160 (1929).

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: A.S. Hitchcock 9914, 20 Nov 1912, Colombia: Bolívar: along a pool in mud or shallow water, E of Cartagena (US-951763).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Albert Spear Hitchcock (1865–1935), United States agrostologist.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, 12–30 cm long, rooting from lower nodes. Culm-nodes glabrous or pubescent. Ligule an eciliate membrane, 0.2 mm long. Leaf-blades 5–13 cm long, 4–9 mm wide.

Inflorescence. Inflorescence composed of racemes, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Racemes 2–3, paired or digitate, unilateral, 1.5–4 cm long. Central inflorescence axis 0.2–1 cm long. Rhachis narrowly winged, angular, 1.2–1.5 mm wide. Spikelet packing abaxial. 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 orbicular, hemispherical, dorsally compressed, plano-convex, obtuse, 1.7–1.8 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, hyaline, dark green, without keels, 2–4 -veined. Upper glume primary vein absent. Upper glume surface wrinkled. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, hyaline, dark green, 2–4 -veined, without midvein, concave across back, wrinkled, obtuse. Fertile lemma orbicular, 1.6 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate. Palea apex pubescent.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America. El Salvador, Guatemala, Nicaragua, Panama. Venezuela. Bolivia, Colombia.

Paspalum huberi S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 505 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya stricta*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya stricta*).

TYPE from Venezuela. **Basionym or Replaced Name:** *Thrasya stricta* A.G.Burman, *Acta Bot. Venezuel.*, 14(4): 75 (1987). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: Otto Huber 974, 21 Aug 1977, Venezuela: Amazonas: terreno situado entre la carretera hacia Samariapo y la pista de aterrizaje del aeropuerto de Puerto Ayacucho, 5°37'N, 67°36'W, alt. ca. 75 m, sobre la Laja Grande, hierba hasta 0.5 m de alto, formando densas colonias (MO-2806206; IT: US-3107016).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (286, Fig. 233 as *Thrasya stricta*).

Derivation (Clifford & Bostock 2007): In honor of Otto Huber (1944-) Venezuelan botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 70–90 cm long. Culm-nodes glabrous. Leaf-sheaths keeled. Ligule an eciliate membrane, 1.5 mm long. Leaf-blades flat or conduplicate, 10–15 cm long, 1–2 mm wide. Leaf-blade surface smooth or scaberulous, rough abaxially, glabrous. Leaf-blade margins glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, arcuate, unilateral, 10 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 2 mm wide, glabrous on surface, tuberculate on margins, ciliate on margins, terminating in a barren extension, extension flattened. Rhachis hairs 3–4 mm long. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, 2.9 mm long, 0.6 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.2 mm long, 0.07 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 1–1.5 mm long, 0.33–0.5 length of spikelet, membranous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex attenuate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic or oblong, 2.9 mm long, 1.2 length of fertile lemma, 1 length of spikelet, coriaceous, sulcate or readily splitting into two halves, ciliate on margins (above), bearing white hairs, acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic or oblong, 2 mm long, coriaceous, without keel. Lemma surface papillose or striate, with conspicuous apical hairs. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

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

Paspalum humboldtianum Fluegge. *Gram. Monog.* 67. (1810).

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 Ecuador. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Humboldt & Bonpland 3104*, no date, Ecuador: Puenbo (B-W; IT: BM, BM, LE-TRIN-0472.01 (fragm. ex B-W), P, SI (photo), US-2855277 (fragm. ex P), US-601340 (fragm. ex P)).

Recent Synonyms: *Paspalum soboliferum* Chase, *Contr. U.S. Natl. Herb.* 24(8): 443 (1927).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (484, Fig 106), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (423, Fig 156).

Illustrations (Journals): *Ruizia* (13:370 Fig 48g-h (1993)).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Friedrich Heinrich Alexander Humboldt (1769–1859) German botanist and traveller.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated, scaly. Culms erect or geniculately ascending, 60–120 cm long, 1.5–2 mm diam. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous or pubescent. Leaf-sheaths glabrous on surface to hispid, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1.8–3.8 mm long, brown. Leaf-blade base cordate. Leaf-blades lanceolate, 7–14 cm long, 8–17 mm wide. Leaf-blade surface glabrous to pubescent. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–5, borne along a central axis, unilateral, 4–7.5 cm long. Central inflorescence axis 2–7 cm long. Rhachis narrowly winged, 1–1.5 mm wide, terminating in a sterile spikelet or barren extension. Spikelet packing 2–4 -rowed. Spikelets in pairs. 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, acute, 3–3.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume margins tuberculate, ciliate. Upper glume hairs 2–3 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 3–3.5 mm long, 1 length of spikelet, membranous, 3 -veined, smooth or scaberulous, rough at apex, acute. Fertile lemma elliptic or obovate, 2.3–2.7 mm long, indurate, pallid, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5–2.2 mm long, purple. Caryopsis with adherent pericarp.

N = 10 (1 ref TROPICOS).

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

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

TDWG4. Catamarca, Jujuy, La Rioja, Salta, San Luis, Tucuman. Cordoba. Distrito Federal, Mexico State, Morelos, Puebla. Aguascalientes, Coahuila, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis

Potosi, Tamaulipas, Zacatecas. Veracruz. Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas.

Paspalum hyalinum Nees ex Trin. *Gram. Panic.* 103. (1826).

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: ST: In Brasilia (LE-TRIN-0473.01). *P. hyalinum* N. ab Es. In Brasilia l. mis. am auctor. LT: *K.F.P. von Martius s.n.*, Jul 1827, Brazil: Minas Gerais (LE; ILT: BM, M, SI (photo), US-2855279 (fragm. ex M), US-951762 (fragm. ex LE)). LT designated by F. Zuloaga & O. Morrone, *Cat. New. World Grass.* 3: 476 (2003).

Recent Synonyms: *Paspalum polychaetum* Mez, *Engl. Jahrb.* 56 *Beibl.* 125, 11 (1921). *Paspalum gossypinum* Mez, *Repert. Spec. Nov. Regni Veg.* 15: 68 (191).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (483, Fig. 105), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (234, Fig. 185), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1033, Fig. 201), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (493, Fig. 85).

Derivation (Clifford & Bostock 2007): Gk. *hyalos*, glass; *-ina*, indicating resemblance. Margins of glumes, lemmas and sterile lemmas hyaline.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 30–50 cm long, rooting from lower nodes. Leaves mostly basal. Ligule an eciliate membrane, 1 mm long. Leaf-blades 8–20 cm long, 2–3.5 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex mucous or pungent.

Inflorescence. Inflorescence composed of racemes. Racemes 3–9, digitate, unilateral, 3–7 cm long. Rhachis angular, 0.3–0.6 mm wide, dark-coloured (purple), scabrous on margins. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5 mm long, glabrous or ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 1–1.4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, hyaline, without keels, 2 -veined. Upper glume primary vein absent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, hyaline, thicker on margins, 2 -veined, without midvein. Fertile lemma elliptic, 1–1.4 mm long, indurate, light brown, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG), Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil, Southern South America. Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Paraguay.

TDWG4. Goias, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul.

Paspalum imbricatum T.S. Filgueiras. *Bradea*, 3(21): 153 (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).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. Hatschbach* 25281, 27 Oct 1970, Brasil: Mato Grosso: Mun. Sidrolandia: Rod. BR 163, orla de brejo (US-2705820; IT: SI (photo)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *imbricare*, overlap like roof-tiles. The shorter branches bear densely overlapping spikelets.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 80–105 cm long. Culm-nodes constricted. Leaf-sheaths outer margin glabrous or hairy. Ligule an eciliate membrane, 1–3 mm long, brown, ciliate from base of abaxial surface, truncate. Leaf-blades 20–40 cm long, 3–5 mm wide, stiff. Leaf-blade surface glabrous or pilose, with simple hairs or tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, digitate, unilateral, 6–10 cm long. Rhachis broadly winged, 2–3 mm wide, glabrous on margins, terminating in a barren extension, extension flattened. Spikelet packing abaxial, crowded, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5–1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, with cordate base, dorsally compressed, plano-convex, subacute, 5–6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, auriculate at base, 1 length of spikelet, membranous, without keels, winged on margins, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma elliptic, 3.5 mm long, indurate, pallid, without keel. Lemma surface smooth, puberulous. Lemma margins involute. Lemma apex acute. Palea involute, indurate. Palea keels puberulous.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mato Grosso.

Paspalum inaequivalve Raddi. *Agrost. Bras.* 28. (1823).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *G. Raddi s.n.*, no date, Brazil: Rio de Janeiro (PI; IT: BM, FI, G-Delessert, K, P, PI, US-2855285 (fragm. ex FI, PI & photo)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1051, Fig. 205), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (395, Fig. 165), B.Rosengurt, *Gramineas Uruguayas I* (1970) (361, Fig. 155 as var. *glabriflorum*).

Derivation (Clifford & Bostock 2007): L. in-, not; aequus, equal; valvus, leaf of a folding door. Glumes differing in size and nervation.

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

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, slender, 15–25 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.2–2 mm long, erose, truncate. Leaf-blade base cordate, with a false petiole. Leaf-blades lanceolate, 4–18 cm long, 4–11 mm wide. Leaf-blade midrib conspicuous. Leaf-blade margins undulate.

Inflorescence. Inflorescence composed of racemes, terminal or terminal and axillary. Racemes 3–10, borne along a central axis, unilateral, 0.5–3 cm long. Central inflorescence axis 5–10 cm long. Rhachis angular, 0.5–0.8 mm wide, scabrous on margins. Spikelet packing 2–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, unequal, 0.5–2 mm long, bearing a few hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 1.5–2 mm long, 0.7–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 0.5 length of spikelet, membranous, dark brown, without keels, 3 -veined. Upper glume apex emarginate or truncate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, dark green, 5 -veined, acute. Fertile lemma elliptic, 1.6–1.8 mm long, 0.6–0.8 mm wide, indurate, pallid, shiny, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, ellipsoid, 1 mm long, dark brown. Embryo 0.5 length of caryopsis. Hilum punctiform.

$N = 30$ (1 ref TROPICOS). $2n = 60$ (2 refs TROPICOS).

Distribution (TDWG). Continent. South America.

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

TDWG4. Mato Grosso, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul, Jujuy, Salta, Tucuman. Buenos Aires, Chaco, Corrientes, Entre Rios, Formosa, Misiones, Santa Fe.

Paspalum inconstans Chase. *Contrib. U. S. Nat. Herb.* xxiv. 446 (1927).

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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Buchtien 7107*, 19 Nov 1922, Bolivia: Hacienda Casana, on the road to Tipuani, alt. 1400 m (US-1164822; IT: MO-941377).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 507: Fig.20 (2005)).

Derivation (Clifford & Bostock 2007): L. variable. Leaf-blades vary in outline from sub-cordate to linear-lanceolate in outline.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 45–85 cm long, without nodal roots or rooting from lower nodes. Culm-internodes elliptical in section, distally glabrous. Culm-nodes brown, glabrous or pubescent. Lateral branches lacking or sparse. Leaf-sheaths mostly shorter than adjacent culm internode, pubescent, outer margin hairy. Ligule an eciliate membrane, 1–2 mm long, brown. Leaf-blades 10–15 cm long, 6–13 mm wide. Leaf-blade surface puberulous, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1–8, borne along a central axis, spreading, unilateral, 4–8 cm long. Central inflorescence axis 2–7 cm long, winged (above), pubescent (below). Rhachis narrowly winged, 1 mm wide, glabrous on surface or puberulous on surface. Spikelet packing abaxial. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 1.5–2 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, plano-convex, 2.2–3 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes one to two the lower present in some spikelets, shorter than spikelet, thinner than fertile lemma. Lower glume 0.1–0.2 length of spikelet. Upper glume ovate, 0.8 length of spikelet, membranous, with hyaline margins, without keels, 3–5 -veined. Upper glume margins pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male or barren, with palea or without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined, eciliate on margins or pubescent on margins, obtuse. Fertile lemma elliptic, 2–2.8 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Bolivia, Colombia, Ecuador, Peru.

Paspalum indecorum Mez. *Fedde, Repert.* xv. 7 1 (1917).

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: HT: *G. Niederlein 554*, 17 Mar 1884, Argentina. Misiones: Pelador, Sierra de Santa Ana (B; IT: BAA-2183 (fragm. ex B), US-2855287 (fragm. ex B)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1033, Fig. 201), B.Rosengurt, *Gramineas Uruguayas I* (1970) (368, Fig. 159).

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes short. Culms geniculately ascending, 20–45 cm long, 2-noded. Ligule an eciliate membrane, 2–3 mm long, pubescent on abaxial surface. Leaf-blades 8–14 cm long, 4–5 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Axillary inflorescences different from terminal (1 raceme). Racemes 3–4, digitate or borne along a central axis, unilateral, 4–8 cm long. Central inflorescence axis 1–3 cm long. Rhachis angular, 0.5 mm wide, glabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2–3 mm long, 0.8–1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2–2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$N = 10$ (1 ref TROPICOS). $2n = 20$ (2 refs TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil South. Paraguay, Uruguay.

TDWG4. Catarina, Rio Grande do Sul. Corrientes, Formosa, Misiones.

Paspalum insulare Ekman. *Contrib. U. S. Nat. Herb.* xxviii. 145 (1929).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman 11957*, 29 Oct 1920, Cuba: La Habana, Santa Ana to Santa Clara (US-1298149).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (221, Fig. 165).

Derivation (Clifford & Bostock 2007): *L. insula*, island; -are, pertaining to. Island species.

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

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Culms erect or geniculately ascending, slender, 40–55 cm long. Lateral branches lacking. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long. Leaf-blades 6–16 cm long, 3–5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, straight or arcuate, unilateral, 3–6.5 cm long. Rhachis wingless, flattened, 1.5 mm wide. Spikelet packing abaxial. Raceme-bases brief, hirsute. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, obtuse, 2.5–2.6 mm long, 1.5–1.6 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface wrinkled. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma elliptic, 2.3 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Paspalum intermedium Munro ex Morong. *Ann. N. Y. Acad. Sci.* vii. 258. (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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Morong 1019*, May 1888–May 1890, Paraguay, Pilcomayo river (NY; IT: BM, G, K, US-1127326, US-824235).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (220, Fig. 81), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1004, Fig. 196), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (401, Fig. 168), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (370, Fig. 160).

Derivation (Clifford & Bostock 2007): *L. intermedium*. Having affinities with but distinct from other species.

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

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations flabellate. Culms robust, 120–180 cm long, 3–5 -noded. Culm-internodes elliptical in section. Leaf-sheaths keeled. Ligule an eciliate membrane. Leaf-blades conduplicate or involute, 30–60 cm long, 8–15 mm wide, stiff. Leaf-blade surface scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes few or numerous, 13–73, borne along a central axis, unilateral, 2–12 cm long. Central inflorescence axis 15–35 cm long, with scattered hairs. Rhachis angular, with scattered hairs. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 2.2–2.3 mm long, 1.1–1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, red, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, red, 5 -veined, with unevenly spaced veins (near margins), acute. Fertile lemma elliptic, 2–2.7 mm long, 1–1.4 mm wide, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, oblong, 1.8 mm long.

$2n = 20$ (3 refs TROPICOS), or 40 (2 refs TROPICOS).

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

Country /Province /State. South-central USA, Southeastern USA, Mexico. Texas. Georgia, Kentucky. Central Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Northern South America, Western South America, Brazil, Southern South America.** Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Tucuman. Buenos Aires, Chaco, Corrientes, Distrito Federal, Entre Rios, Formosa, Misiones, Santa Fe. Mexico State. Veracruz. Jalisco. Chiapas.

Paspalum ionanthum Chase. *Journ. Wash. Acad. Sc.* xxvii. 145. (1937).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E. Hassler 12383*, Dec 1913, Paraguay: Central Paraguay: region of Lake Ypacaray (US-1037280; IT: BM, G, LIL-393394, MO-847481, US-1057321).

Illustrations (Books): B.Rosengurt, *Gramineas Uruguayas I* (1970) (as ssp. *guaraniticum*).

Derivation (Clifford & Bostock 2007): Gk *ion*, the violet; *anthos*, flower. Stigmas and anthers deep purple.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms geniculately ascending, 15–40 cm long, 1 -noded. Culm-internodes elliptical in section. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane. Leaf-blades flat or involute, 5–8 cm long, 2–5 mm wide. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–5.5 cm long. Central inflorescence axis 0 cm long. Rhachis angular, 0.8 mm wide, glabrous on margins. Spikelet packing adaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 3.4–3.7 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 3.4–3.7 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil South. Paraguay, Uruguay.

TDWG4. Catarina, Rio Grande do Sul. Corrientes, Entre Rios.

Paspalum jaliscanum Chase ex Hitchcock. *Contrib. US. Nat. Herb.* xvii. 240 (1913).

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: HT: A.S. Hitchcock 7153, 23 Sep 1910, Mexico. Jalisco: Zapotlan to Nevado de Colima (US-691236).

Recent Synonyms: *Paspalum tonduzii* Mez, *Fedde, Repert.* 15: 72 (1917).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -anum, indicating location. From Jalisco, Mexico.

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

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Rhizomes elongated, scaly, hairy. Culms geniculately ascending, slender, 100 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths longer than adjacent culm internode, hirsute, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 3 mm long. Leaf-blades 12–20 cm long, 12–15 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface glabrous or pilose, hairy adaxially. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–12, borne along a central axis, unilateral, 4–7 cm long. Central inflorescence axis 6–8 cm long. Rhachis wingless, angular, 0.6–0.7 mm wide, glabrous on margins. Spikelet packing crowded, irregular. Spikelets in pairs. 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, dorsally compressed, plano-convex, obtuse, 2.2–2.3 mm long, 1.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, with tubercle-based hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, concave across back, pubescent on midvein, obtuse. Fertile lemma ovate, 2.2 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Central Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Western South America.** Costa Rica, Guatemala, Honduras. Colombia.

TDWG4. Distrito Federal. Hidalgo, Zacatecas. Jalisco, Michoacan. Chiapas.

Paspalum jesuiticum L. Parodi. *Darwiniana*, xv. 104 (1969).

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: *Araujo* 179, 11 Feb 1953, Brazil. Rio Grande do Sul: Porto Alegre (BAA).

Recent Synonyms: *Paspalum perspicinervium* Renv., *Kew Bull.* 42: 922 (1987).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -icum, belonging to. In honor of the Jesuit Order.

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

Habit, Vegetative Morphology. Perennial. Stolons present. Basal innovations intravaginal. Culms decumbent, 30–60 cm long, 2–3 -noded. Culm-nodes black, glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, pilose. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades lanceolate, 6–12 cm long, 6–10 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides. Leaf-blade margins undulate.

Inflorescence. Inflorescence composed of racemes. Racemes 7–8, borne along a central axis, unilateral, 3–6 cm long. Central inflorescence axis 4–5 cm long. Rhachis narrowly winged, angular, 1.6–1.8 mm wide, with scattered hairs, glabrous on margins. Spikelet packing 4 -rowed. Raceme-bases pubescent. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2.8 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma ovate, gibbous, 2.5 mm long, indurate, yellow, without keel. Lemma surface punctate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Lodicules 2, cuneate, 0.4 mm long. Anthers 3, 1–1.4 mm long, yellow.

Distribution (TDWG). Continent. South America.

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

TDWG4. Misiones.

Paspalum jimenezii Chase. *Contrib. U. S. Nat. Herb.* xxviii. 159 (1929).

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: *O. Jiménez 742*, 5 Jan 1913, Costa Rica: Guanacaste: along the margin of the Río Bebedero, at Las Playitas, 50 m, 10.21N 85.12W (US-951752; IT: CR-33693, US-951753).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (425, Fig 157).

Derivation (Clifford & Bostock 2007): in honor of Oton Jimenez (1895-) Costa Rican plant collector.

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 10–20 cm long, 0.5–1 mm diam. Culm-internodes thin-walled, distally glabrous. Culm-nodes pubescent. Leaf-sheaths keeled, outer margin hairy. Ligule an eciliate membrane, 0.2–0.3 mm long. Leaf-blades 4.5–8 cm long, 4–6 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–8, digitate, unilateral, 2–2.5 cm long. Central inflorescence axis 0.5 cm long. Rhachis wingless, flattened, 0.5 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.4 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, 1.4–1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume primary vein absent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 2 -veined, without midvein. Fertile lemma ovate, 1.4–1.5 mm long, coriaceous, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, coriaceous.

Flower and Fruit. Anthers 3, 0.6 mm long, indehiscent, red (pink). Caryopsis with adherent pericarp.

$2n = 30$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Costa Rica.

Paspalum juergensii Hack. *Fedde, Repert. Nov. Sp.* vii. 312 (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Jurgens G265*, no date, Brazil. Rio Grande do Sul. Mun. Soledade: Campos de Alto Jacuty (W; IT: US-2855292).

Illustrations (Books): S.A.Rennoize, *Gramineas de Bolivia* (1998) (487, Fig 107), B.Rosengurt, *Gramineas Uruguayas I* (1970) (368, Fig. 159 as *P. juergensii*).

Derivation (Clifford & Bostock 2007): in honor of Carlo Juergens (fl. 1905) who collected in Brazil.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 80–100 cm long, 3–6 -noded. Culm-nodes brown, pubescent. Lateral branches lacking or sparse. Leaf-sheaths keeled, hispid, with tubercle-based hairs. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades linear or lanceolate, 10–30 cm long, 8–20 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 8–20, borne along a central axis, unilateral, 6–10 cm long. Rhachis angular, 0.7 mm wide, with scattered hairs, scabrous on margins. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 1–2 mm long, 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 orbicular, dorsally compressed, plano-convex, 1.5–1.7 mm long, 1.1–1.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 0.9–1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret orbicular, 1 length of spikelet, membranous, 3 -veined, pubescent, obtuse. Fertile lemma orbicular, 1.5–1.7 mm long, indurate, yellow, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, orbicular, light brown. Embryo 0.33 length of caryopsis.

$2n = 20$ (3 refs TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia, Colombia, Ecuador. Brazil Southeast, Brazil South. Uruguay.

TDWG4. Mato Grosso, Catarina, Rio Grande do Sul. Misiones.

Paspalum jujuyense Zuloaga. *Bol. Soc. Argent. Bot.* 16(1–2): 65 (1974).

Regarded by K as a synonym (*P. denticulatum*).

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. L. Cabrera *et al.* 21626, 25 Feb 1971, Argentina. Jujuy. Dpto. Dr. Manuel Belgrano: Sierra de Zapla, Mina 9 de Octubre (LP).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Jujuy Province, Argentina.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 80–100 cm long, 2–4 -noded. Leaf-sheaths longer than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 2.5–3.5 mm long. Leaf-blades 15–30 cm long, 4–8 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 11–13, borne along a central axis, unilateral, 3–7 cm long. Central inflorescence axis 15–20 cm long. Rhachis narrowly winged, flattened, 2 mm wide, ciliate on margins. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 2–3 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, distinctly veined, acute. Fertile lemma elliptic, 2.2–2.5 mm long, 1.3–1.5 mm wide, indurate, yellow, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2–1.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Jujuy.

Paspalum kempffii Killeen. *Ann. Missouri Bot. Gard.* 77(1): 179, f. 5 (1990).

Regarded by K as a synonym (*P. guenoarum*).

TYPE from Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: T. Killeen 2272, 3 Jan 1987, Bolivia: Santa Cruz: Ñuflo de Chavez, Estancia La Pachanga, 5 km S of Concepción, 16°08'S 62°05'W, 500 m, eroded Tertiary planation surface overlying Precambrian Shield, mosaic of semideciduous forest, wooded savanna and savanna wetland, caespitose perennial, innovations extravaginal (or from short stout rhizome), foliage mostly basal, sheaths slightly equitant, blades flat or folded, stiffly ascending, glaucous on abaxial surface, very palatable, occasional, forming distinct populations, here found in gravel soil above laterite outcrops with *Trachypogon* sp., voucher: chromosome number $2n = ca. 30$, meiosis abnormal, with I, II, and III (ISC; IT: CTES, F, LPB, MO-3794751, NY, SI, SP, US).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Noel Kempff Mercado (1924–1986) Bolivian biologist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 120–150 cm long. Ligule an eciliate membrane. Leaf-blades flat or conduplicate, 30 cm long, 4–6 mm wide, glaucous. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or borne along a central axis, unilateral, 7–13 cm long. Central inflorescence axis 5–6 cm long. Rhachis 1 mm wide. Spikelet packing 4 -rowed. Spikelets in pairs. 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, dorsally compressed, plano-convex, 3.6–3.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 2.5 mm long, 0.66 length of spikelet, membranous, 3 -veined. Upper glume elliptic, 1 length of spikelet, chartaceous, without keels, 5–7 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, chartaceous, 5–7 -veined. Fertile lemma elliptic, 3.6–3.8 mm long, indurate, dark brown, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

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

Paspalum killipii (Hitchcock) F.O. Zuloaga & T.R. Soderstrom. *Smithsonian Contrib. Bot.*, 59: 40: (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 Peru. **Basionym or Replaced Name:** *Panicum killipii* Hitchc., *J. Wash. Acad. Sci.* 20(15): 383 (1930). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.P. Killip & A.C. Smith 22804*, 7–17 May 1929, Peru: Ayacucho: in thickets, Aina, between Huanta and Río Apurimac (US-1357803).

Illustrations (Journals): *Ruizia* (13:366 Fig 47g-k (1993)).

Derivation (Clifford & Bostock 2007): in honor of Ellsworth Paine Killip (1890–1968) United States botanist.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 80–160 cm long, rooting from lower nodes. Culm-internodes 12–28 cm long. Culm-nodes glabrous. Leaf-sheaths 12–17 cm long, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, brown, pubescent on abaxial surface, lacerate. Leaf-blade base cordate, without a false petiole or with a false petiole, petiole 0–3 cm long. Leaf-blades lanceolate, 20–35 cm long, 20–38 mm wide. Leaf-blade surface glabrous or pubescent, sparsely hairy, hairy adaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, borne along a central axis, distant, unilateral, 6–15 cm long. Central inflorescence axis 15–30 cm long. Rhachis flattened, scabrous on surface. Spikelets in pairs. Fertile spikelets sessile and pedicelled. Pedicels present, oblong.

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, plano-convex, 2–2.4 mm long, 0.8–1 mm wide, falling entire.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2–1 mm long, 0.1–0.5 length of spikelet, 0 -veined. Lower glume lateral veins absent. Lower glume surface pubescent. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or pubescent, hairy at apex. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, glabrous or pubescent, hairy at apex, obtuse. Palea of lower sterile floret 1.8–2.2 mm long. Fertile lemma ovate, 2–2.3 mm long, indurate, pallid, shiny, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex scabrous. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.3 mm long. Caryopsis with adherent pericarp, 1.4 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Paspalum lachneum Nees ex Steud. *Syn. Pl. Gram.* 26 (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F. Sello s.n.*, Brazil (B; IT: LE-TRIN-0476.01 (fragm. ex B & illustr.), US-2855786 (fragm. ex B) (fragm.)). fig. 301 *Paspalum lachneum* Nees in herb. Brazil. Berol..

Recent Synonyms: *Paspalum verrucosum* Hack. *Bull. Herb. Boissier, ser. 2*, .

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. lachnos, wool; L. -ea, pertaining to. Leaf-blades and leaf-sheaths densely hairy.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Basal innovations extravaginal. Culms erect, 30–45 cm long, 3–7 -noded. Culm-internodes distally glabrous. Culm-nodes bearded. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface or hirsute, outer margin hairy. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 15–30 cm long, 3–4 mm wide, stiff. Leaf-blade surface hirsute, hairy adaxially or on both sides. Leaf-blade margins cartilaginous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 6–13 cm long. Central inflorescence axis 1.5–2 cm long. Rhachis angular, 0.5–0.7 mm wide, pubescent on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.5–1 mm long or 1–1.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2.2–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous. Upper glume surface villous, hairy generally or above, with tubercle-based hairs. Upper glume hairs white, 2–2.5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, villous, with tubercle-based hairs, obtuse. Fertile lemma elliptic, 2.2–3 mm long, indurate, yellow, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.3–0.4 mm long. Anthers 3, 1.5–2 mm long, purple.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, and Southern South America. Paraguay. TDWG4.

Paspalum lacustre Chase ex Swallen. *Phytologia*, xiv. 374 (1967).

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: *R.L. Fróes & G.A. Black 27312*, 8 Jul 1951, Brazil: Amapá: Macapa Mun., Ambe (IAN-64326; IT: US-2205896, US-2599402 (fragm. ex IAN & photo)).

Illustrations (Books): E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (Fig. 84).

Derivation (Clifford & Bostock 2007): L. lacus, lake; -estre, place of growth. Growing in or around lakes.

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

Habit, Vegetative Morphology. Perennial. Culms 75 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–1.5 mm long, erose. Leaf-blades floating, 8–13 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, digitate, unilateral, 3–7 cm long. Rhachis broadly winged, foliaceous, 1.7–2.4 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, dorsally compressed, plano-convex, acuminate, 2.1–2.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined. Fertile lemma elliptic, 1.8–2.3 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse, pubescent (sparsely). Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Paspalum laeve Michx. *Fl. Bor. Am.* i. 44. (1803).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Michaux s.n.*, no date, USA: Georgia (P-MICHX; IT: US-2855780 (fragm. ex P-MICHX & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (573), F.W.Gould, *The Grasses of Texas* (1975) (528, Fig. 277 as var. *laeve*), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:99(1980)).

Derivation (Clifford & Bostock 2007): L. smooth. Lacking hairs or roughness, usually of leaf-blades or lemmas.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 40–100 cm long. Leaf-sheaths keeled, glabrous on surface or pilose. Ligule an eciliate membrane, 1–3 mm long. Leaf-blades conduplicate, 5–30 cm long, 3–10 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, borne along a central axis, unilateral, 4–10 cm long. Central inflorescence axis 4–10 cm long. Rhachis wingless, flattened. Spikelet packing abaxial, 2-rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.7–2 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or orbicular, dorsally compressed, 2.4–3.4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 5–7 -veined, with unevenly spaced veins (near margins), obtuse. Fertile lemma orbicular, 2.4–3.4 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. North-central USA, Northeast USA, South-central USA, Southeastern USA. Illinois, Kansas, Missouri, Oklahoma. Massachusetts, Rhode Island. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia.

Paspalum lamprocaryon K. Schum. *Engl. Pflanzenw. Ost-Afr.* C 100 (1895).

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: *Stuhlmann 3901*, Tanzania: Bukoba (B).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. lampros, splendid; karyon, nut. Anthoecium glossy and chestnut brown.

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

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, robust, 90–200 cm long, 3–7 mm diam., rooting from lower nodes. Leaf-sheaths longer than adjacent culm internode. Ligule an eciliate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 8–30 cm long, 8–27 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–11, borne along a central axis, unilateral, 4–12 cm long. Central inflorescence axis 1–9 cm long. Rhachis broadly winged, 2–3 mm wide. Spikelet packing abaxial, regular, 2 -rowed. 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 orbicular, dorsally compressed, plano-convex, obtuse, 2–2.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, dark brown, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, obtuse. Fertile lemma ovate, gibbous, 2–2.5 mm long, indurate, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa. Rwanda, DRC. Chad, Ethiopia (inc. Eritrea), Sudan. Malawi, Zambia, Zimbabwe.

Paspalum lanciflorum Trin. *Sp. Gram. Ic.* iii. t. 286. (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.H. von Langsdorff s.n.*, 1829, Brazil: Cuyaba: in collibus declivis glareosis (LE-TRIN-0480.01 (& fig.); IT: US-80075 (fragm. ex LE)).

Recent Synonyms: *Paspalum contractum* Pilg., *Bot. Jahrb. Syst.* 25(5): 709–710 (1898).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (235, Fig. 186), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (469, Fig. 83).

Derivation (Clifford & Bostock 2007): *L. lanceus*, lance; flos, flower. Spikelets lanceolate in outline.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 50–70 cm long. Ligule an eciliate membrane, 1.5–2.2 mm long, brown. Leaf-blades 17–35 cm long, 7–10 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Peduncle 10 cm long, glabrous. Racemes 2–6, digitate, unilateral, 6–8 cm long. Rhachis broadly winged, membranous, 5–7 mm wide, light-coloured. Spikelet packing abaxial, 2 -rowed. 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 lanceolate, dorsally compressed, plano-convex, 6–7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface with basal tufts of hair (3 tufts).

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 3 -veined, puberulous, with tubercle-based hairs, tuberculate on margins, ciliate on margins, fringed below, bearing hairs 1.5 mm long. Fertile lemma lanceolate, 3.8–4.5 mm long, coriaceous, yellow, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, and Brazil. Panama. Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North.

TDWG4. Roraima, Mato Grosso, Goias, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum langei (Fourn.) Nash. *N. Amer. Fl.* xvii. 179 (1912).

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. **Basionym or Replaced Name:** *Dimorphostachys langei* E. Fourn., *Mexic. Pl.* 2: 14–15 (1886). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Liebmann 179, in part*, May, Mexico: Mecapalco (C). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 105 (1929). ST: *Liebmann 186*, Mexico: Hacienda de Jovo (C).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (589), F.W.Gould, *The Grasses of Texas* (1975) (511, Fig. 268), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (210, Fig. 147).

Derivation (Clifford & Bostock 2007): in honor of Johann Martin Christian Lange (1818–1898) Danish botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–100 cm long. Ligule an eciliate membrane. Leaf-blades 7–18 mm wide. Leaf-blade surface glabrous or puberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, borne along a central axis, unilateral, 4–8 cm long. Central inflorescence axis 2–8 cm long. Rhachis wingless, flattened. Spikelet packing 4 -rowed. Spikelets in pairs. 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, dorsally compressed, plano-convex, 2.2–2.6 mm long, falling entire.

Glumes. Glumes two or one to two the lower present in some spikelets, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.33 length of spikelet. Upper glume elliptic, 1 length of spikelet, membranous, glandular, without keels, 3 -veined. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, glandular, 3 -veined, pubescent. Fertile lemma elliptic, 2.2–2.6 mm long, indurate, light brown, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. South-central USA, Southeastern USA, Mexico. Texas. Florida, Louisiana. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America.** Belize, El Salvador, Guatemala, Honduras, Nicaragua. Cuba, Haiti. Venezuela.

TDWG4. Puebla. Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Guerrero, Michoacan. Quintana Roo.

Paspalum latipes Swallen. *Phytologia*, xiv. 377 (1967).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: A. Macedo 2188, 8 Mar 1950, Brazil: Minas Gerais (US-2010216).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. latus*, broad; pes, foot. Spikelets broad-based.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 75 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous or pubescent. Leaf-sheaths longer than adjacent culm internode, keeled, glabrous on surface or pilose, outer margin hairy. Ligule an eciliate membrane, 2 mm long. Leaf-blades conduplicate, 15–30 cm long, 4–8 mm wide. Leaf-blade surface hispid, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, unilateral, 9–10 cm long. Central inflorescence axis 1–2 cm long. Rhachis angular, 1–1.2 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 3.5–3.7 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, wrinkled, rough on flanks, obtuse. Fertile lemma elliptic, 3.5–3.7 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Paspalum laxum Lam. *Illustr. i.* 176. (1791).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from America merid. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Richard s.n.*, no date, (P; IT: US-80072 (fragm. ex P & photo), US-80073 (fragm. ex P)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (595), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (215, Fig. 156).

Derivation (Clifford & Bostock 2007): L. loose. Inflorescence much branched either as a single panicle or from branching of the culms.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, slender, 30–110 cm long. Culm-nodes brown, glabrous. Lateral branches lacking. Leaf-sheaths smooth. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades flat or involute, 15–50 cm long, 3–8 mm wide. Leaf-blade surface glabrous or puberulous, hairy adaxially. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–14, borne along a central axis, arcuate, unilateral, 3–10 cm long. Rhachis wingless, angular, pubescent on surface, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 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 elliptic, dorsally compressed, plano-convex, obtuse, 1.7–2 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined, obtuse. Fertile lemma elliptic, 1.6–1.7 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 60$ (1 ref TROPICOS).

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

Country /Province /State. Southeastern USA. Florida. **Mesoamerica, Caribbean, Northern South America, Western South America, Southern South America.** Belize. Aruba, Bahamas, Bermuda, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago, Venezuelan and Netherlands Antilles. French Guiana. Colombia.

Paspalum lenticulare H. B. & K. *Nov. Gen. et Sp.* 1: 92. (1815).

Regarded by K as a synonym (*P. plicatulum*).

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 Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.W.H.A. von Humboldt & A.J.A. Bonpland s.n.*, Sep, Venezuela: Sucre (P; IT: LE-TRIN-0482.01a (fragm.), US-80080 (fragm. ex B-W, P-BONPL)).

Illustrations (Books): No illustration found (BKS).

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

Flower and Fruit. $2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Venezuela. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South.

Paspalum lentiferum Lam. *Tabl. Encycl.* 1: 175 (1791).

Regarded by K as a synonym (*P. hartwegianum*).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *D. Fraser s.n.*, no date, USA: South Carolina (P; IT: US-2855792 (fragm. ex P-LA), US-2942570 (fragm. ex P-LA)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. lens, lentil; fero, bear. The anthoecia resemble lentils.

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

Distribution (TDWG). Continent. North America.
Country /Province /State. Southeastern USA. South Carolina.

Paspalum lentiginosum J. & C. Presl. *Rel. Haenk.* i. 218. (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Haenke s.n.*, Mexico (PR; IT: MO-1837592, MO-1837593 (line drawing), P, US-951622 (fragm. ex PR & photo)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. lentigo*, lentil-shaped spot; -osum, abundance. Spikelets ovate-orbicular resembling lentils.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 75–140 cm long. Lateral branches sparse. Leaf-sheaths loose, longer than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 2–4 mm long. Leaf-blades 12–25 cm long, 8–14 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 4–17, borne along a central axis, unilateral, 3–7 cm long. Central inflorescence axis 4.5–11 cm long. Rhachis wingless, angular. Raceme-bases linear, 2–8 mm long. Spikelets in pairs. 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 orbicular, hemispherical, dorsally compressed, plano-convex, obtuse, 1.7–1.9 mm long, 1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, with tubercle-based hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma orbicular, 1.6–1.8 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Western South America.** El Salvador, Guatemala, Honduras, Nicaragua, Colombia.

TDWG4. Morelos. Aguascalientes, Durango. Veracruz. Sinaloa, Sonora. Colima, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas.

Paspalum lepidum Chase. *Contr. U.S. Natl. Herb.* 24(8): 447 (1927).

Regarded by K as a synonym (*P. inconstans*).

TYPE from Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 22726, 25 Dec 1923, Bolivia: La Paz, Nor Yungas, Coroico (US-1164799).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. pretty*. Plants with an attractive appearance as with colored spikelets.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms geniculately ascending, 20–45 cm long. Culm-internodes elliptical in section, distally glabrous or pilose. Culm-nodes glabrous or pubescent. Leaf-sheaths keeled, glabrous on surface or pubescent, outer margin hairy. Ligule an eciliate membrane, 1 mm long, brown. Leaf-blades 7–11 cm long, 5–10 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Axillary inflorescences compact or enclosed. Racemes 3–4, borne along a central axis, ascending or spreading, unilateral, 2–5 cm long. Central inflorescence axis 2.5–4 cm long, pilose. Rhachis narrowly winged, 0.8 mm wide. Spikelet packing abaxial. Raceme-bases brief, pubescent. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 1.5 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 elliptic, dorsally compressed, plano-convex, 2.3–2.4 mm long, 1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure or two, shorter than spikelet, thinner than fertile lemma. Lower glume 0.1–0.2 length of spikelet. Upper glume ovate, 0.9 length of spikelet, membranous, light brown or purple, without keels, 5 -veined. Upper glume surface puberulous, hairy above. Upper glume margins pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, light brown or purple, 5 -veined, pubescent, obtuse. Fertile lemma elliptic, 2.3–2.4 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Paspalum leptachne Chase. *Contrib. U. S. Nat. Herb.* xxviii. 220 (1929).

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: HT: *J.N. Rose 1961*, 3 Aug 1897, Mexico: Nayarit: near Pedro Paulo (US-300853).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. *leptos*, narrow; *achne*, scale. Glumes narrow-lanceolate.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short, woody. Culms erect, 130–150 cm long. Culm-internodes elliptical in section. Lateral branches lacking. Leaf-sheaths loose, as wide as blade at the collar, outer margin hairy. Ligule an eciliate membrane, 1.5–2 mm long, lacerate. Leaf-blades 20–30 cm long, 7–10 mm wide. Leaf-blade surface puberulous, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 8–9, borne along a central axis, ascending, unilateral, 5–13 cm long. Central inflorescence axis 15 cm long. Rhachis wingless, angular, 1.7–1.8 mm wide. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 3 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, subacute, 2.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, hyaline, light brown, without keels, 5 -veined. Upper glume lateral veins obscure. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, hyaline, light brown, 5 -veined, obscurely veined, smooth or wrinkled (near margins), obtuse. Fertile lemma elliptic, 2.6 mm long, indurate, dark brown, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Gulf (Mexico), Northwest Mexico, Southwest Mexico.

TDWG4. Veracruz. Sinaloa. Nayarit.

Paspalum ligulare Nees. *Agrost. Bras.* 60. (1829).

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: *K.F.P. von Martius s.n.*, no date, Brazil: Bahia, Feira de S. Anna & Monte Sancto (M; IT: US-80077 (fragm. ex M)).

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (210, Fig. 78).

Derivation (Clifford & Bostock 2007): L. *ligula*, small tongue; -aris, pertaining to. Ligule conspicuous.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–120 cm long. Ligule an eciliate membrane, 2.8–5 mm long. Leaf-blades flat or conduplicate, 16–60 cm long, 1.5–5 mm wide. Leaf-blade surface scabrous, glabrous or pilose, sparsely hairy. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, borne along a central axis, unilateral, 6–16 cm long. Rhachis scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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 obovate, dorsally compressed, plano-convex, 2–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 0.75–1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2–3 mm long, indurate, pallid, shiny, without keel. Lemma surface granulose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

N = 20 (1 ref TROPICOS).

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

Country /Province /State. Mexico. Gulf (Mexico), Northwest Mexico, Southwest Mexico. **Mesoamerica, Caribbean, Brazil.** Belize, Guatemala, Honduras, Nicaragua. Brazil Northeast, Brazil Southeast.

TDWG4. Bahia, Maranhao, Piaui. Veracruz. Sinaloa. Jalisco, Oaxaca.

Paspalum lilloi Hack. *Ann. Conserv. & Jard Bot. Geneve*, xvii, 282 (1914).

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: HT: *M. Lillo 10526*, 7 Oct 1910, Argentina: Misiones: Salto Iguazú (W; IT: G, LIL, US-2855787 (fragm. ex W)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Miguel Lillo (1862–1931) Argentine botanist.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 40 cm long, 2 -noded. Culm-internodes distally glabrous. Ligule an eciliate membrane, 2–4 mm long, truncate. Leaf-blades 20–30 cm long, 4–6 mm wide. Leaf-blade surface glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 5, borne along a central axis, unilateral, 3–7 cm long. Central inflorescence axis 3–4 cm long. Rhachis narrowly winged, angular, 1.5 mm wide. Spikelet packing abaxial, lax, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 1 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, plano-convex, acute, 5–6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume margins ciliate (below). Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 3 -veined, ciliate on margins, fringed below, acuminate. Fertile lemma lanceolate, 5–6 mm long, indurate, pallid, without keel, 3 -veined, 0–3 -veined. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil South. Paraguay.

TDWG4. Misiones.

Paspalum limbatum Henrard. *Blumea*, 4: 511 (1941).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Paraguay, Villa Rica: Balansa 107 (L holo, G, P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. limbus*, border; -ata, possessing. Glumes or lemmas colored differently on their margins and centres.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 35–50 cm long, 2 mm diam., 2–3-noded. Culm-internodes terete, 3–5 cm long, striate, distally glabrous. Culm-nodes brown, glabrous. Leaf-sheaths 5–7 cm long, longer than adjacent culm internode, keeled, glabrous on surface. Ligule an eciliate membrane, 1.2–2.4 mm long. Leaf-blades flat or conduplicate, 10–20 cm long, 1–2 mm wide. Leaf-blade surface glabrous, hairless throughout or except near base. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 2–4, borne along a central axis, unilateral, 2–3 cm long. Central inflorescence axis 3–4 cm long. Rhachis wingless, angular, 0.4 mm wide, glabrous on surface, scabrous on margins, terminating in a sterile spikelet. Spikelet packing 4-rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.4–0.6 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, obtuse, 1.6–1.8 mm long, 1–1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5-veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, thicker on margins, thinner along midline, 5-veined, smooth, obtuse. Fertile lemma elliptic, gibbous, 1.5–1.7 mm long, 1 mm wide, indurate, dark brown, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.2 mm long.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Paraguay.

Paspalum lindenianum A.Rich. *Fl. Cub. Fanerog.* ii. 299. (1850).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.J. Linden 1813*, May 1844, Cuba: Oriente, Santa Maria (P; IT: NY-71049 (possible), US-80152 (fragm. ex P)). T: *J.J. Linden 1813*, May 1844, Cuba: Oriente (US-80063). Also type of (and filed as) *Paspalum longiflorum* Steudel.

Recent Synonyms: *Paspalum longifolium* Roxb., *Hort. Beng.* 7; *Fl. Ind.* i. 280 (1820).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (220, Fig. 163).

Derivation (Clifford & Bostock 2007): *L. -ana*, indicating connection. In honor of Jean Jules Linden (1817–1898) Luxembourg-born Belgian botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 30–80 cm long, wiry, 2-noded. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.2 mm long. Leaf-blades filiform, 20–50 cm long, 1 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2(–4), single or paired or borne along a central axis, straight or arcuate, unilateral, 3–14 cm long. Central inflorescence axis 0.5–2 cm long. Rhachis wingless, semiterete. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or rhomboid, dorsally compressed, plano-convex, acute, 2.5–2.8 mm long, 1.7–1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7-veined. Upper glume surface wrinkled. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5-veined, wrinkled, acute. Fertile lemma elliptic, 2 mm long, 1.4 mm wide, indurate, yellow, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia, South America.

Country /Province /State. Indo-China, Malesia, Papuasias. Thailand. Borneo, Java, Lesser Sunda Is, Sumatra, Sulawesi, Malaya, Philippines. New Guinea. **Caribbean.** Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica.

Paspalum lineare Trin. *Gram. Panic.* 99 (1826).

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.H. von Langsdorff s.n.*, Nov. 1824, Brazil: Serra da Lapa: in umbrosis humidis (LE-TRIN-0085.01 a (photo, K, SI); IT: US-950896 (fragm.)). fig.: *Paspalum lineare* m.

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (205, Fig. 138).

Derivation (Clifford & Bostock 2007): *L. lineare*, linen thread; -are, pertaining to. Leaf-blades narrow.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms 40–110 cm long, 1–1.5 mm diam. Culm-internodes thin-walled, distally glabrous. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths glabrous on surface to pilose. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.4–1 mm long. Leaf-blades filiform, terete, 30–60 cm long, 1–1.5 mm wide.

Inflorescence. Inflorescence composed of racemes. Peduncle pilose above. Racemes 2, paired, unilateral, 4–6 cm long. Central inflorescence axis 0.4–1 cm long. Rhachis wingless, 0.4–0.7 mm wide. Spikelet packing abaxial, lax, 2 -rowed. Raceme-bases linear, 4–6 mm long, pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–2 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 4.3–5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface with basal tufts of hair (1 on each margin). Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 3.8–4.3 mm long, indurate, yellow, without keel. Lemma surface papillose or striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, ellipsoid, 2.6 mm long.

$2n = 80$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, Nicaragua, Panama. Bahamas, Bermuda, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico. Guyana, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Mato Grosso, Goias, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Chaco, Misiones. Puebla. Chiapas, Tabasco.

Paspalum lividum Trin. ex Schtdl. *Linnaea* 26(3): 383 (1854).

Regarded by K as a synonym (*P. denticulatum*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *C.J.W. Schiede s.n.*, Jul, Mexico: Veracruz: ad Hacienda de la Laguna (LE-TRIN-0441.03: ILT: B, BM, HAL-4839, G, P, US-928992 (fragm. ex LE-TRIN)). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 57 (1929). ST: *C. Ehrenburg s.n.*, Mexico: ad balnea prope Reglam.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (598), F.W.Gould, *The Grasses of Texas* (1975) (521, Fig. 274), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (202, Fig. 133), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1033, Fig. 201 & 1047, Fig. 204), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (398, Fig. 167 & 397, Fig. 166), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (528, Fig. 138), B.Rosengurt, *Gramineas Uruguayas I* (1970) (370, Fig. 160), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:100(1980)).

Illustrations (Journals): *Ruizia* (13:375 Fig 49a-c (1993)).

Derivation (Clifford & Bostock 2007): L. leaden. Spikelets grey or purple.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, culms solitary. Stolons present. Culms decumbent, 30–70 cm long. Culm-internodes elliptical in section. Culm-nodes brown. Leaf-sheaths keeled, glabrous on surface or hispid, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades 15–25 cm long, 3–6 mm wide. Leaf-blade surface glabrous or hirsute, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 3–7, borne along a central axis, unilateral, 1.5–4 cm long. Central inflorescence axis 2–8 cm long. Rhachis narrowly winged (purple), angular, 1.5–2 mm wide, with scattered hairs or glabrous on surface. Spikelet packing 4 -rowed. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, subacute or acute, 2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic, gibbous, 2–2.5 mm long, indurate, yellow, without keel. Lemma surface rugulose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. **South-central USA, Southeastern USA, Mexico.** Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Cuba. Bolivia. Brazil South. Argentina Northeast.

TDWG4. Catarina, Rio Grande do Sul. Buenos Aires, Entre Rios. Distrito Federal, Morelos, Puebla. Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi. Veracruz. Sinaloa. Jalisco, Michoacan, Nayarit, Oaxaca.

Paspalum loefgrenii Ekman. *Arkiv Bot. Stockh.* x. No. 17, 15 (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: A. *Loefgren* 721, 5 May 1910, Brazil: Ceara/Rio Grande do Norte, Serra Camara (S; IT: R-4018, US-80065 (fragm. ex S)).

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (210, Fig. 78).

Derivation (Clifford & Bostock 2007): in honor of Albert Lvfgren (1854–1918) Swedish-born Brazilian botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 120 cm long. Ligule an eciliate membrane, 0.3 mm long. Leaf-blades 40 cm long, 10 mm wide. Leaf-blade surface pubescent, densely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 20, borne along a central axis, unilateral, 8–11 cm long. Central inflorescence axis 20–25 cm long. Rhachis angular, 0.7 mm wide. Spikelet packing 2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, flexuous, 1–2.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, with truncate base, dorsally compressed, plano-convex, acute, 2.7–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pubescent. Fertile lemma elliptic, 2.7–3 mm long, indurate, yellow, without keel. Lemma surface granulose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. **Northern South America, Brazil.** Guyana, Venezuela. Brazil Northeast, Brazil North.

TDWG4. Bahia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe.

Paspalum longiaristatum G. Davidse & T.S. Filgueiras. *Novon*, 3(2): 129 (1993).

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.S. Filgueiras* 2277, 13 Apr 1992, Brazil: Goiás: Niquelândia, Macedo, ca. 18 km N of Niquelândia (IBGE; IT: MO, SI, US-3278350).

Illustrations (Journals): *Novon* (3:130, Fig.1 (1993)).

Derivation (Clifford & Bostock 2007): *L. longus*, long; arista, bristle. Lemmas or glumes long awned.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms 15–36 cm long, 4–9 -noded. Culm-internodes distally glabrous. Culm-nodes pubescent. Leaves cauline. Leaf-sheaths without keel, pilose, with tubercle-based hairs. Ligule a fringe of hairs, 0.7–1.6 mm long. Leaf-blades 4–8.2 cm long, 1–2 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface hirsute, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous or pubescent above. Racemes 1–2, single or paired, arcuate, unilateral, 3–6.8 cm long. Central inflorescence axis 1.3–2 cm long, tip without extension or filiform (0–3mm). Rhachis broadly winged, membranous, folded longitudinally to embrace spikelets, 4.5–6 mm wide, dark-coloured (purple), pilose on surface, ciliate on margins, terminating in a barren extension, extension flattened. Spikelet packing abaxial. Raceme-bases brief, pilose. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 1.8–2.2 mm long, 0.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1.8–2.2 mm long, 1 length of spikelet, hyaline, without keels, 3 -veined. Upper glume surface pubescent, hairy below. Upper glume margins ciliate. Upper glume awned, 1 -awned, awn 6–12.2 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, hyaline, 3 -veined, pubescent, hairy at base, ciliate on margins, awned. Awn of lower sterile floret 0.3–2 mm long. Fertile lemma elliptic, 1.5–1.8 mm long, coriaceous, pallid, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins involute, scaberulous. Lemma apex acute. Palea involute, coriaceous.

Flower and Fruit. Anthers 3, 1.4–1.9 mm long. Caryopsis with adherent pericarp, 1–1.2 mm long. Embryo 0.6–0.7 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central.

Paspalum longicuspe Nash. *N. Amer. Fl.* xvii. 172 (1912).

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: HT: *C.G. Pringle* 3854, 2 Oct 1891, Mexico: Jalisco: floating in water near Guadalajara (NY; IT: B, BM, ISC, MEXU, MO-2977069, P, US-824334, US-1649839 (fragm. ex B)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. longus*, long; *cuspis*, point. Rhachis extending beyond the spikelet as a short stalk.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms prostrate, 100–150 cm long, spongy, rooting from lower nodes. Leaf-sheaths inflated. Ligule an eciliate membrane, 3 mm long, brown. Leaf-blades 6–16 cm long, 6–12 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 30–80, borne along a central axis, unilateral, 2–4 cm long. Central inflorescence axis 5–12 cm long. Rhachis deciduous from axis, broadly winged, foliaceous, folded longitudinally to embrace spikelets, 2–2.5 mm wide, scabrous on margins, terminating in a barren extension, extension flattened, extension 10–15 mm long. Spikelet packing abaxial, regular, 1 -rowed. Raceme-bases linear, 2–5 mm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, acuminate, 2.2–2.6 mm long, 1.1 mm wide, falling entire, deciduous with accessory branch structures.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, hyaline, without keels.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, hyaline, mid-green or red (at base). Fertile lemma elliptic, 2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Northwest Mexico, Southwest Mexico, Southeast Mexico. Sinaloa. Guerrero, Jalisco, Nayarit, Oaxaca. Chiapas.

Paspalum longifolium Roxb. *Hort. Beng.* 7; *Fl. Ind.* i. 280 (1820).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: cultivated, *W. Roxburgh s.n.* (HT: BM (photo, K); IT: US-1445175 (fragm.)).

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (586), C-C Hsu, *Taiwan Grasses* (1975), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl. 812), H.J.Noltie, *The Grasses of Bhutan* (2000) (713, Fig. 42), H.B.Gilliland, *Grasses of Malaya* (1971) (Pl 14), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (105, Fig. 107), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (328), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (223, Fig. 36), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 739), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:101(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002); H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);.

Derivation (Clifford & Bostock 2007): *L. longus*, long; folium, leaf. With long leaf-blades.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–130 cm long. Culm-nodes glabrous. Leaf-sheaths keeled, glabrous on surface or hirsute, outer margin glabrous or hairy. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 3–9 mm wide. Leaf-blade surface glabrous or hirsute. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–5(–12), digitate or borne along a central axis, spreading, unilateral, 1.5–6.5 cm long. Central inflorescence axis 1–10 cm long. Rhachis broadly winged, with sharp-edged midrib, 1.7–3 mm wide, scabrous on margins. Spikelet packing regular, 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 0.3–0.8 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, obtuse, 1.7–2.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, chartaceous, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, chartaceous, 3 -veined, glabrous or puberulous, obtuse. Fertile lemma elliptic or obovate, gibbous, 1.6–2.4 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1–1.2 mm long.

$N = 20$ (1 ref TROPICOS). $2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia, Australasia, Pacific.

Country /Province /State. China, Eastern Asia. China South Central, Hainan, China Southeast. Japan, Nansei-Shoto, Ogosawara-shoto, Taiwan. Japan Honshu. **Indian Subcontinent, Indo-China, Malesia, Papuasiasia.** Eastern Himalaya, India, Nepal, Sri Lanka. Andaman Is, Cambodia, Myanmar, Thailand, Vietnam. Malaya. New Guinea West Papua (Irian Jaya). New Guinea, Solomon Is. **Australia.** Northern Territory, Queensland, New South Wales. **Southwestern Pacific, Northwestern Pacific.** Nauru, New Caledonia, Samoa. Caroline Is, Marianas. Hawaii.

TDWG4. Fujian, Guangdong, Guangxi, Zhejiang. Yunnan. Bhutan. Assam, Nagaland, Tripura. Bihar. Orissa, Tamilnadu, West Bengal. Darwin & Gulf, Victoria R & Barkly Tableland. North, Central, South East. Coast.

Paspalum longipilum Nash. *Bull. N. York Bot. Gard.* i. 435. (1900).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. V. Nash 1027*, 12–30 Jun 1894, USA: Florida: Lake Co.: Eustis (NY-6635; IT: MO-2976697, NY-6634, US-741176, US-2855809 (fragm. ex NY & photo)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. longus*, long; pilus, a hair. Plant with long hairs investing all or any of its parts.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culm-internodes elliptical in section. Leaf-sheaths keeled, hirsute. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades erect, conduplicate, 15–20 cm long, 7–10 mm wide. Leaf-blade surface pubescent, densely hairy, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, borne along a central axis, ascending or spreading, unilateral, 5–7 cm long. Rhachis narrowly winged, flattened. Spikelet packing abaxial, 2 -rowed. 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, dorsally compressed, 2.75 mm long, 2.25 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined. Fertile lemma elliptic, 2.75 mm long, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southeastern USA. Florida.

Paspalum longum Chase. *Proc. Calif. Acad. Sc. Ser. IV.* xx. 52 (1931).

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: HT: *H.L. Mason 1648*, 7 May 1925, Mexico. Revillagigedo Islands (CAS; IT: US-1449808).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 80–100 cm long. Culm-internodes elliptical in section, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths as wide as blade at the collar, without keel, smooth, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 3 mm long, pilose on abaxial surface. Leaf-blades ascending, 70–100 cm long, 8–10 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade margins scabrous, tuberculate-ciliate, hairy at base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, shorter than basal leaves, exserted or embraced at base by subtending leaf. Racemes 9–13, borne along a central axis, unilateral, 8–12 cm long. Central inflorescence axis 12–18 cm long. Rhachis wingless, angular, 1 mm wide, puberulous on surface, scabrous on margins. Spikelet packing crowded. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, angular.

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 to ovate, dorsally compressed, plano-convex, obtuse or subacute, 2.8–2.9 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic or ovate, 1 length of spikelet, hyaline, without keels, 3 -veined. Upper glume surface papillose. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic or ovate, 1 length of spikelet, hyaline, 3 -veined, papillose, obtuse. Fertile lemma elliptic or

obovate, 2.5 mm long, 1.6 mm wide, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Southwest Mexico.

TDWG4. Colima.

Paspalum luxurians R. Guzmán & L. Rico. *Phytologia* 51(7): 467 (1982).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: R. Guzmán M. 283, 14 Aug 1976, Mexico: Jalisco (IBUG-27648).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico.

TDWG4. Mexico State. Guanajuato. Jalisco.

Paspalum macedoi Swallen. *Phytologia* 14: 377. 1967.

Regarded by K as a synonym (*P. guenoarum*).

Accepted by: U. Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Macedo 4299, 10 Feb 1956, Brazil. Minas Gerais: Monte Alegre de Minas (US-2208261).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Amaro Macedo (1914-) Brazilian botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, 100–120 cm long. Ligule an eciliate membrane. Leaf-blades 20–55 cm long, 5–10 mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, borne along a central axis, unilateral, 12–16 cm long. Rhachis 0.8 mm wide. Spikelet packing 4 -rowed. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, 3.3–3.5 mm long, 2.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume surface glabrous or pilose.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, glabrous or pilose. Fertile lemma elliptic, 3.3–3.5 mm long, indurate, dark brown, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Bolivia.

Paspalum macranthecium L. Parodi. *Not. Mus. La Plata, Bot.*, viii. 83 (1943).

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:** *Eriochloa castanea* Hack., *Repert. Spec. Nov. Regni Veg.* 7: 370 (1909). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: T. Rojas 10777 (*Hassler number*), Mar 1908, Paraguay: Sierra de Amambay (W; IT: B, G, US-952143).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk *makros*, large; *anthos*, flower. Spikelets larger than those of related species.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 50 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.8 mm long, truncate. Leaf-blades lanceolate, 15–24 cm long, 6–18 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–3, single or paired or borne along a central axis, unilateral, 4.9–6.6 cm long. Rhachis angular, 1.7 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, obtuse, 3.5–3.8 mm long, 2–2.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, 5 -veined, wrinkled, glabrous. Fertile lemma obovate, 3.5–3.8 mm long, 2–2.1 mm wide, indurate, dark brown, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast.

***Paspalum macrophyllum* H. B. & K. *Nov. Gen. et Sp.* 1: 92 (1815).**

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), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.W.H.A. von Humboldt & A.J.A. Bonpland s.n.*, Sep-Oct, Colombia: Tolima, Ibague & Contreras (P; IT: P, US-2855795 (fragm. ex P)).

Recent Synonyms: *Paspalum eitenii* Swallen, *Phytologia* 14: 385 (1967).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. makros, large; phyllon, leaf. Leaf-blades large.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous or pilose. Culms 100–150 cm long. Lateral branches sparse, arising from upper culm. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Ligule an eciliate membrane. Leaf-blades lanceolate, 15–39 cm long, 15–25 mm wide. Leaf-blade surface glabrous or hispid, with tubercle-based hairs. Leaf-blade margins scabrous, glabrous or ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–15, borne along a central axis, unilateral, 5–10 cm long. Rhachis wingless, angular, 1 mm wide. Spikelets in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, 2–2.7 mm long, 1.4 mm wide, falling entire.

Glumes. Glumes one to two the lower present in some spikelets, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined, glabrous or pubescent. Fertile lemma elliptic, 2–2.5 mm long, indurate, yellow, without keel. Lemma surface papillose or striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific, South America.

Country /Province /State. North-central Pacific. Hawaii (*). **Northern South America, Western South America, Brazil.** Colombia, Ecuador, Peru. Brazil Northeast.

TDWG4. Maranhao, Piaui.

***Paspalum maculosum* Trin. *Gram. Panic.* 98 (1826).**

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.H. von Langsdorff s.n.*, Jan. 1825, Brazil: S[erra] da Carassa: in campis altis graminosis (LE-TRIN-0487.01 (& fig.; photo, K, SI); IT: LE, US-2855797 (fragm. ex LE)).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (236, Fig. 188), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (918, Fig. 184), B.Rosengurt, *Gramineas Uruguayas I* (1970) (364, Fig. 157).

Derivation (Clifford & Bostock 2007): *L. macula*, spot; -osa, abundance. Spikelets or culms spotted with reddish-brown or yellow patches.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–90 cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.6 mm long. Leaf-blades 15–22 cm long, 1.5–2.5 mm wide. Leaf-blade surface pubescent. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Peduncle 12 cm long, glabrous. Racemes 2, paired, unilateral, 6–10 cm long. Central inflorescence axis 0 cm long. Rhachis 0.7–1 mm wide, scabrous on margins. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.3–1.7 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or orbicular, dorsally compressed, plano-convex, 2.4–2.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, light brown or purple (mottled), without keels, 3 -veined. Upper glume lateral veins obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, light brown or purple (mottled), 3 -veined, obscurely veined. Fertile lemma elliptic, 2.3–2.5 mm long, indurate, pallid, without keel. Lemma surface granulose or striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil, Southern South America. Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Uruguay.

TDWG4. Mato Grosso, Goias, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Corrientes, Formosa, Misiones.

Paspalum madorense S.A. Renvoize. *Kew Bull.*, 39(1): 179 (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R.M. Harley, S.A. Renvoize, C.M. Erskine & C.A. Brighton 16724*, 4 Mar 1974, Brazil: Estado de Bahia: Serra do Curral Feio: elev. 950–1000 m (CEPEC; IT: K, LE, MO-3426089, NY-214695, U, UB, US-3260304). Ex Herbario Kewensi.

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (207, Fig. 76).

Derivation (Clifford & Bostock 2007): *L. madeo*, be wet. Growing in damp sandy soil.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 30–40 cm long. Ligule an eciliate membrane. Leaf-blades conduplicate, 9–22 cm long, 2–4 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 4–6 cm long. Central inflorescence axis 1–2 cm long. Rhachis scaberulous on margins. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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 obovate, dorsally compressed, plano-convex, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4. Bahia.

Paspalum malacophyllum Trin. *Sp. Gram.* Ic. iii. t. 271. (1836).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Cuyaba, Chapada, April 1829, *G.H. von Langsdorff s.n.* (HT: LE; IT: K, LE, US).

Recent Synonyms: *Paspalum tenuifolium* Swallen, *Phytologia*, 14: 384 (1967).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (585), S.A.Renvoize, *Gramineas de Bolivia* (1998) (452, Fig 98), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1051, Fig 205), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 735).

Derivation (Clifford & Bostock 2007): Gk. malakos, soft to the touch; phyllon, leaf. Leaf-blades velvety-pilose.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes short, scaly. Culms 70–200 cm long. Ligule an eciliate membrane, 2 mm long. Leaf-blades 8–35 mm wide. Leaf-blade surface glabrous or pubescent, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 10–45, borne along a central axis, unilateral, 2–10 cm long. Central inflorescence axis 10–30 cm long. Rhachis narrowly winged, angular. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, plano-convex, 1.8–2 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, 3 -veined or 5 -veined, obtuse. Fertile lemma elliptic, gibbous, 1.8–2 mm long, indurate, without keel, 7 -veined, more than 3-veined. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 40$ (3 refs TROPICOS).

Distribution (TDWG). Continent. Temperate Asia, North America, South America.

Country /Province /State. China. China North-Central. Hawaii (*). **Mexico.** Northeast Mexico, Gulf (Mexico), Southeast Mexico. **Mesoamerica, Western South America, Brazil, Southern South America.** Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northwest, Paraguay.

TDWG4. Gansu (+). Amazonas, Acre, Rondonia, Mato Grosso, Goias, Maranhao, Piaui, Sao Paulo Parana. Catamarca, Jujuy, La Rioja, Salta, Santiago del Estero, San Juan, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Formosa, Misiones. Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum malmeanum Ekman. *Arkiv Bot. Stockh.* x. No. 17, 12 (1911).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.O.A. Malme s.n.*, 31 May 1903, Brazil: Mato Grosso, Santa Ana da Chapada (S; IT: US-80089 (fragm. ex S)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Gustaf Oskar Andersson Malme (1864–1937) Swedish botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–80 cm long. Ligule an eciliate membrane. Leaf-blades convolute, 15–45 cm long, 1–3 mm wide. Leaf-blade surface pubescent. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 7–12 cm long. Central inflorescence axis 0 cm long. Rhachis narrowly winged, 1–2 mm wide. Spikelet packing abaxial, 2 -rowed. 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, plano-convex, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose, hairy generally or below, with tubercle-based hairs. Upper glume hairs white.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pubescent. Fertile lemma obovate, 1.5 mm long, indurate, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Bolivia. Brazil West Central.

Paspalum mandiocanum Trin. *Gram. Panic.* 113. (1826).

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.H. von Langsdorff s.n.*, Brazil: prope Mandiocam, in siccis (LE-TRIN-0489.02 (& fig.); IT: US-951095 (fragm. ex LE-TRIN)). *fide* Chase, Mandioca is the name of Langsdorff's estate north of Rio de Janeiro..

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (328), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1051, Fig 205).

Derivation (Clifford & Bostock 2007): L. *-anum*, indicating location. From Mandioca, Brazil.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 45–125 cm long, without nodal roots or rooting from lower nodes. Culm-internodes distally glabrous. Leaf-sheaths keeled. Ligule an eciliate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 10–30 cm long, 8–17 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, unilateral, 3–9 cm long. Rhachis angular, 1 mm wide. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 2–2.1 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 2–2.1 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 50$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Australasia, South America.

Country /Province /State. Australia. Queensland, New South Wales. Brazil, Southern South America. Brazil West Central, Brazil Southeast, Brazil South. Paraguay, Uruguay.

TDWG4. Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Tucuman. Corrientes, Misiones.

Paspalum maritimum Trin. *Mem. Acad. Petersb. Ser.* VI. iii. II. 148. (1835).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *L. Riedel s.n.*, 1831, Brazil: Bahia (LE-TRIN-0491.01 (prob. HT)); IT: BM, NY, P, US-951621 (fragm.). other label: Prov. Ilheus.

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (216, Fig. 80), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1051 & 1052, Fig 205 & 206).

Derivation (Clifford & Bostock 2007): *L.* belonging to the sea. Growing by the seaside.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly. Stolons absent or present. Culms geniculately ascending, 30–50 cm long. Culm-nodes black, pubescent or bearded. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blades 6–50 cm long, 8–20 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 3–7, borne along a central axis, unilateral, 4–9 cm long. Central inflorescence axis 4–6 cm long. Rhachis wingless, flattened. Spikelet packing crowded, irregular. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, 1.7–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma ovate, 1.7–2 mm long, indurate, light brown, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America, Western South America, Brazil. Cuba. French Guiana, Guyana, Surinam, Venezuela. Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South.

TDWG4. Para, Amapa, Goias, Bahia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Catarina, Rio Grande do Sul.

Paspalum marmoratum Kuhl. *Arch. Jard. Bot. Rio de Janeiro*, iv. 348 (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>: *vide* TROPICOS and Kew Synonymy Database: IT: *G.S.B. de Capanema 5408*, 19--, Brazil (US-950648).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (204, Fig. 75).

Derivation (Clifford & Bostock 2007): *L. marmor*, marble; *-ata*, possessing. One of more structures has purple blotches.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual. Culms 20–30 cm long. Ligule an eciliate membrane. Leaf-blades 5–12 cm long, 3–5 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–4, borne along a central axis, unilateral, 3–5 cm long. Rhachis scaberulous on margins. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.25–0.33 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pubescent, acute. Fertile lemma elliptic, 2.5 mm long, indurate, pallid or light brown, mottled with last colour, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast, Brazil North.

TDWG4. Mato Grosso, Bahia, Maranhao, Piaui.

Paspalum mayanum Chase. *Publ. Carnegie Inst. Wash. No.* 436, p. 342 (1934).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *J.R. Swallen 2623*, 20 Jul 1932–21 Jul 1932, Mexico: Yucatan: along trail through brush, Uxmal (US-1537457).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-anum*, indicating connection. In honor of the Mayan civilisation of northern Central America.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 25–50 cm long. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths pubescent. Ligule an eciliate membrane, 1 mm long. Leaf-blades 6–15 cm long, 5–10 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, borne along a central axis, unilateral, 1.3–5 cm long. Central inflorescence axis 1.5–6 cm long. Rhachis wingless, angular, 0.5–0.7 mm wide, with scattered hairs or glabrous on surface. Spikelet packing crowded. Raceme-bases brief, pilose. Spikelets in pairs. 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, dorsally compressed, 1.6–1.8 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface puberulous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, puberulous. Fertile lemma elliptic, 1.6–1.8 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Southeast Mexico.

TDWG4. Campeche, Yucatan.

Paspalum melanospermum Desv. ex Poir. *Encyc. Suppl.* iv. 315. (1816).

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. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: French Guiana, Cayenne: Desvaux.

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (238, Fig. 191), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (230, Fig. 175), E.Judziwicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (467, Fig. 82).

Derivation (Clifford & Bostock 2007): Gk. melas, black; sperma, seed. Lemma dark, investing the grain.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual. Culms 30–50 cm long, rooting from lower nodes. Ligule an eciliate membrane, 4 mm long, brown. Leaf-blades 10–15 cm long, 6–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, borne along a central axis, unilateral, 2.5–4 cm long. Rhachis wingless, 1 mm wide. Spikelet packing abaxial. 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 obovate, dorsally compressed, plano-convex, 2.2–2.3 mm long, 1.5–1.6 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous. Fertile lemma elliptic, 2 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Southwest Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Leeward Is, Windward Islands. French Guiana, Guyana, Surinam. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South.

TDWG4. Roraima, Amazonas, Acre, Rondonia, Maranhao, Piaui. Jalisco, Nayarit, Oaxaca.

Paspalum microstachyum J. & C. Presl. *Rel. Haenk.* i. 215. (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Haenke s.n.*, no date, Mexico? (PR; IT: MO, US-2855801 (fragm. ex PR)).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (427, Fig 158).

Derivation (Clifford & Bostock 2007): Gk. mikros, small; stachys, ear of corn. Inflorescences or spikelets small.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending or decumbent, 15–85 cm long, 1–2.5 mm diam., rooting from lower nodes. Culm-internodes thin-walled, mid-green or purple, distally glabrous. Culm-nodes brown, glabrous. Lateral branches sparse. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 0.5 mm long, brown. Leaf-blade base cordate. Leaf-blades lanceolate, 4–23 cm long, 6–23 mm wide. Leaf-blade surface pilose, hairy adaxially or on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 15–30, borne along a central axis, spreading or drooping, unilateral, 5–30 cm long. Central inflorescence axis 3–15 cm long, with scattered hairs. Rhachis narrowly winged, 0.6–0.8 mm wide, with scattered hairs. Spikelet packing 4 -rowed. Raceme-bases brief, pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, acute, 1.4–1.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, puberulous, acute. Fertile lemma elliptic or obovate, 1.4 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.4 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 1 mm long. $2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). **Continent.** North America, South America.

Country /Province /State. Mexico. Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Venezuela. Colombia, Ecuador, Peru. Brazil Northeast.

Goias, Maranhao, Piaui. Veracruz. Nayarit. Tabasco.

Paspalum millegrana Schrad. *Mant.* 2: 175. 1824.

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: In Brasilia, *Princeps Sereniss. Maximilian Neowidensis s.n.* (HT: B?).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (233, Fig. 184), S.A.Renvoize, *Gramineas de Bolivia* (1998) (474, Fig. 103), S.A.Renvoize, *The Grasses of Bahia*, 1984 (224, Fig. 83), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (233, Fig. 183), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1004, Fig. 196 & 1019, Fig. 198).

Derivation (Clifford & Bostock 2007): L. mille, one thousand; granum, grain. Inflorescence of many spikelets.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths spongy. Culms erect or geniculately ascending, robust, 90–200 cm long. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, as wide as blade at the collar, reticulately veined, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1.5–2 mm long. Collar glabrous or pilose. Leaf-blades conduplicate, 30–75 cm long, 7–15 mm wide. Leaf-blade surface scabrous, rough abaxially, glabrous or pubescent, hairy adaxially, with tubercle-based hairs. Leaf-blade margins spinulose. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes few or numerous, 6–60, borne along a central axis, simply spaced, ascending or spreading, unilateral, 6–16 cm long. Central inflorescence axis 6–30 cm long. Rhachis wingless, angular, 0.9–1.2 mm wide, scabrous on margins, ciliate on margins. Spikelet packing crowded, irregular. Raceme-bases brief, pilose. Spikelets in pairs. 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 orbicular, dorsally compressed, plano-convex, obtuse, 2–2.4 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, purple, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, purple, 3 -veined, obtuse. Fertile lemma orbicular, 2–2.1 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Bahamas, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South.

TDWG4. Para, Amapa, Goias, Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Puebla. Tamaulipas. Veracruz. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum minarum Hack. *Oesterr. Bot. Zeitschr.* 51:235 (1901).

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: A.F.M. Glaziov 20131, no date, Brazil: Minas Gerais (W; IT: K, P, US-2855817 (fragm. ex W)).

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (216, Fig. 80).

Derivation (Clifford & Bostock 2007): from Minas Gerais Province, Brazil.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 30–60 cm long. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blades flat or involute, 13–21 cm long, 1–2 mm wide. Leaf-blade surface pilose, sparsely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–7, borne along a central axis, unilateral, 4–10 cm long. Central inflorescence axis 2–8 cm long. Rhachis flattened. Spikelet packing abaxial. Raceme-bases hirsute. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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 obovate, dorsally compressed, plano-convex, 1.7–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume primary vein absent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 2 -veined, without midvein, acute. Fertile lemma elliptic, 1.7–2 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 50$ (2 refd TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil Southeast.

TDWG4. Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum minus Fourn. *Mex. Pl. Enum. Gram.* 6 (1886).

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: LT: *Bourgeau* 2298, Mexico: Veracruz: in valle Cordovensi (P; ILT: NY-22371 (fragm.), US-80087 (fragm. & photo ex P)). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 67 (1929).

Recent Synonyms: *Paspalum barretoii* T.S. do Canto-Dorow, J.F.M. Valls & H.M. Longhi-Wagner.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (204, Fig. 135), S.A.Renvoize, *Gramineas de Bolivia* (1998) (483, Fig 105), W.Burger, *Flora Costaricensis* 15, *Gramineae: Fieldiana Botany New Series* 4 (1980) (428, Fig 159).

Derivation (Clifford & Bostock 2007): L. less. Smaller in stature than a related species.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated, woody, scaly. Culms decumbent, 27–53 cm long, 1–2 mm diam. Culm-internodes distally glabrous. Culm-nodes constricted, brown, glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths as wide as blade at the collar, keeled, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.2–0.7 mm long, brown. Leaf-blades 8–14 cm long, 4–7 mm wide, light green. Leaf-blade midrib prominent beneath. Leaf-blade surface glabrous or pilose, hairy adaxially, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate, hairy at base. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Peduncle pilose above, tipped by a glumaceous appendage. Racemes 2, paired, unilateral, 4–7 cm long. Rhachis narrowly winged, 0.8–1 mm wide. Spikelet packing abaxial, 2-rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or obovate, dorsally compressed, obtuse, 2.4–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic or obovate, 2.1–2.2 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.9–1.2 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 1.4 mm long.

$2n = 20$ (3 refs TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. South-central USA, Southeastern USA, Mexico. Texas. Alabama, Florida, Louisiana, Mississippi. Central Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico. Bolivia, Colombia, Peru. Brazil West Central, Brazil North, Brazil South. Chile South, Paraguay, Uruguay.

TDWG4. Buenos Aires, Corrientes, Entre Rios. Los Lagos. Mexico State. Guanajuato, San Luis Potosi, Tamaulipas. Veracruz. Michoacan. Chiapas, Tabasco.

Paspalum modestum Mez. *Fedde, Repert.* xv. 68 (1917).

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: HT: *Niederlein* 392m, 26 Aug 1892, Argentina: Corrientes (B; IT: BAA-2209 (fragm. ex B), US-80088 (fragm. ex B)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (582), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (390, Fig. 162).

Derivation (Clifford & Bostock 2007): L. moderate. Culms of average height.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 20–40 cm long, 3–5 mm diam., rooting from lower nodes. Culm-internodes 4–10 cm long. Ligule an eciliate membrane, 1.5–2 mm long, truncate. Leaf-blades 10–20 cm long, 6–10 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, paired or digitate, unilateral, 2.5–12 cm long. Central inflorescence axis 2–5 cm long. Rhachis narrowly winged, angular, 1–2 mm wide. Spikelet packing 2–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, subacute, 2.6–3 mm long, 1.2–1.6 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, smooth or wrinkled, acute. Fertile lemma elliptic, 2.3–2.8 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, ovoid, 2 mm long. Embryo 0.3 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. South-central USA, Southeastern USA. Texas. Louisiana. **Brazil, Southern South America.** Brazil South. Paraguay.

TDWG4. Catarina, Rio Grande do Sul. Chaco, Corrientes, Entre Rios, Santa Fe.

Paspalum molle Poir. *Encyc. v. 34.* (1804).

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 Virgin Is. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A.P. Ledrú s.n.*, no date, Virgin Islands: St. Thomas (P; IT: US-80060 (fragm. ex P & photo), US-80060 (fragm. ex FI)).

Recent Synonyms: *Paspalum simile* Mez, *Repert. Spec. Nov. Regni Veg.* 15: 70 (1917)

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (214, Fig. 153), S.A.Renouze, *The Grasses of Bahia*, 1984 (230, Fig. 85).

Derivation (Clifford & Bostock 2007): L. soft. Softly hairy usually of leaf-blades.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms slender, 10–50 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths keeled, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 3–18 cm long, 2–7 mm wide. Leaf-blade surface glabrous, hairless throughout or except near base. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–3(–5), paired or borne along a central axis, unilateral, 1.5–7 cm long. Rhachis wingless, angular. Spikelet packing lax. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.5–1 length of fertile spikelet.

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, plano-convex, subacute, 1.7 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined, glabrous or pubescent, acute. Fertile lemma ovate, 1.7 mm long, indurate, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America, Western South America, Brazil. Bahamas, Leeward Is, Puerto Rico. Venezuela. Colombia. Brazil Northeast.
TDWG4. Bahia, Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe, Sao Paulo Parana.

Paspalum monostachyum Vasey ex Chapm. *Fl. S. U. St. Suppl.* 665. (1883).

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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. P. Garber 224, Jul 1877, USA. Florida (US-2855820).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (596), F.W.Gould, *The Grasses of Texas* (1975) (511, Fig. 269).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 510: Fig.21 (2005)).

Derivation (Clifford & Bostock 2007): Gk. monos, one; stachys, ear of corn. Inflorescence a single spike or raceme.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes elongated, scaly. Culms 50–120 cm long. Ligule a ciliate membrane. Leaf-blades involute, 20–30 cm long, 1–2 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–3, single or borne along a central axis, unilateral, 10–25 cm long, simple or secondarily branched. Rhachis wingless. Spikelets in pairs. Fertile spikelets sessile and 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, dorsally compressed, plano-convex, subacute, 3–3.5 mm long, falling entire.

Glumes. Glumes one to two the lower present in some spikelets, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 3–3.5 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. South-central USA, Southeastern USA, Mexico. Texas. Florida, Louisiana. Gulf (Mexico). **Brazil.** Brazil West Central. Goias. Veracruz.

Paspalum moratii Toutain. *Austrobaileya* 3(4): 724, f. 1, 2B-D. 1992.

Regarded by K as a synonym (*P. scrobiculatum*).

TYPE from New Caledonia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Nouvelle Calédonie: Port Laguerre, cultivé en collection, originaire de Koné, prairie sur alluvions anciennes, Apr 1985, B. Toutain 4028 (HT: P; IT: BRI, NOU).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Phillipe Morat (1937-) French botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, short-lived, caespitose. Culms erect, 50–70 cm long, 4–6 -noded. Leaf-sheaths outer margin hairy. Ligule an eciliate membrane, 0.8 mm long. Leaf-blades 5–25 cm long, 7–11 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–7.5 cm long. Central inflorescence axis 0.5–1 cm long. Rhachis broadly winged, with sharp-edged midrib, 2 mm wide. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular, dorsally compressed, plano-convex, obtuse, 2.2–3.1 mm long, 2–2.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, chartaceous, light brown, without keels, 5 -veined. Upper glume surface wrinkled. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, chartaceous, light green, 5 -veined, obtuse. Fertile lemma orbicular, gibbous, 2.2–3.1 mm long, indurate, light brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Stigmas white.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Southwestern Pacific. New Caledonia.

Paspalum morichalense G. Davidse, F.O. Zuloaga & T.S. Filgueiras. *Novon*, 5(3): 234 (1995).

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: HT: G. Davidse 3770, 6 Nov 1973, Venezuela: Guárico: ca. 32 km SSE of Calabozo on Finca Becerra, in and around morichal with standing water, morichal dominated by *Mauritia flexuosa*, 65 m, culms widely creeping, on mud and in shallow water (MO-2616314; IT: AAU, K, LE, MEXU, MG, PRE, SI, US-3321545, VEN).

Illustrations (Journals): *Novon* (5:235, Fig.1 (1995) as *Panicum*).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. Growing around morichales, the Venezuelan name for palm swamps.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 13–25 cm long, spongy, rooting from lower nodes. Culm-internodes 13–25 cm long, distally glabrous. Culm-nodes brown, glabrous or pubescent. Leaves cauline. Leaf-sheaths 2–8 cm long, keeled, glabrous on surface. Ligule an eciliate membrane, 0.6–2 mm long, truncate. Collar glabrous. Leaf-blades spreading or reflexed, linear or lanceolate, 3.5–11 cm long, 1.5–3 mm wide. Leaf-blade surface smooth or scaberulous, rough adaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes, embraced at base by subtending leaf. Peduncle 2 cm long. Racemes 1–2, single or paired, unilateral, 3–6 cm long. Rhachis broadly winged, foliaceous, folded longitudinally to embrace spikelets, 1.1–3.5 mm wide, scaberulous on margins. Spikelet packing abaxial, lax, 1.1–1.2 their length apart, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, concavo-convex, subacute, 2.1–2.9 mm long, 0.9–1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1.1–1.2 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 3–5 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined. Fertile lemma elliptic, 2.1–2.8 mm long, indurate, pallid, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex acute, papillose. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.3 mm long, truncate. Anthers 3, 0.5–0.8 mm long, purple. Stigmas 2, purple. Caryopsis with adherent pericarp, ellipsoid, 1.6–1.8 mm long. Embryo 0.33 length of caryopsis. Hilum linear, 0.66 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast.

Paspalum mosquitiense (G. Davidse & A.G. Burman)S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 511 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya mosquitiensis* G. Davidse & A.G. Burman, *Ann. Missouri Bot. Gard.*, 74(2): 434 (1987).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Mosquitia region, sometimes called Costa de Miskitos, of Nicaragua and Honduras.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending or decumbent, 65–110 cm long, without nodal roots or rooting from lower nodes. Culm-internodes distally pubescent. Culm-nodes bearded. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane, 1.5–2.4 mm long. Leaf-blades 16–32 cm long, 9–16 mm wide. Leaf-blade surface glabrous or puberulous, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous or pubescent above. Racemes 1, single, unilateral, 1–16 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 2–2.8 mm wide, glabrous on surface, scaberulous on margins, terminating in a spikelet. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly, 1.8–3 mm long, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 3.4–4 mm long, 1.4–1.8 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.6–2.5 mm long, 0.2–0.66 length of spikelet, hyaline, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse, muticous or awned, 1 -awned, awn 0.7–1.2 mm long. Upper glume elliptic, 2.8–3.4 mm long, 0.75 length of spikelet, chartaceous, without keels, 5(–7) -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, coriaceous, sulcate or readily splitting into two halves, acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 3–3.6 mm long, coriaceous, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea coriaceous.

Flower and Fruit. Anthers 3, 1.3–1.9 mm long, purple.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Honduras, Nicaragua.

Paspalum motembense Leon. *Bull. Torr. Bot. Cl.* 1926, liii. 457. (1926).

TYPE from Cuba. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *León & Loustalot 9354*, 9 Aug 1920, Cuba. Santa Clara: Sabana de Motembo (NY; IT: US-2942544 (fragm. & photo)). US fragment has only a single damaged spikelet.

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (237, Fig. 191).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Sabana de Motembo, Cuba.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, 60 cm long. Lateral branches lacking. Leaves without demarcation between sheath and blade. Leaf-sheaths longer than adjacent culm internode, wider than blade at the collar, keeled. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades conduplicate, 20–30 cm long, 5–8 mm wide. Leaf-blade surface glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 6–10, borne along a central axis, unilateral, 4.5–5 cm long. Central inflorescence axis 15 cm long. Rhachis wingless, angular, 1 mm wide. Spikelets in pairs. 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, dorsally compressed, plano-convex, obtuse, 2.5 mm long, 1.2–1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, light brown, without keels, 5 -veined. Upper glume surface puberulous, hairy below. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, light brown, 3 -veined, obtuse. Fertile lemma elliptic, 2.3 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Paspalum multicaule Poir. *Encyc. Suppl.* iv. 309. (1816).

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: *R.L. Desfontaines & A.N. Desvaux s.n.*, no date, Brazil (FI; IT: P, US-2942541 (fragm. ex FI)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (223, Fig. 169), S.A.Renouze, *The Grasses of Bahia*, 1984 (230, Fig. 85), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (410, Fig 149).

Illustrations (Journals): *Ruizia* (13:363 Fig 46a-d (1993)).

Derivation (Clifford & Bostock 2007): *L. multus*, many; *caulis*, stem. Culms much branched.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms 12–40 cm long, 1 mm diam. Culm-internodes thick-walled, distally glabrous. Culm-nodes glabrous. Leaf-sheaths keeled, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 0.3–0.5 mm long, brown. Leaf-blades revolute, 4–12 cm long, 1.5–2.5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Peduncle tipped by a glumaceous appendage. Racemes 2, paired, unilateral, 1–4 cm long. Rhachis narrowly winged, 0.5–0.7 mm wide. Spikelet packing abaxial, 2 -rowed. Raceme-bases brief, pubescent. 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 orbicular, dorsally compressed, 1.1–1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 2–3 -veined. Upper glume primary vein absent or distinct. Upper glume surface puberulous, with clavate hairs (globular).

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 2 -veined, without midvein, eciliate on margins or ciliolate on margins (globular hairs). Fertile lemma ovate, 0.5–0.7 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.3 mm long, purple. Caryopsis with adherent pericarp, orbicular, plano-convex, 0.8–1 mm long.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. **Mexico.** Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Belize, Costa Rica, El Salvador, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North.

TDWG4. Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso, Goias, Bahia, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo. Mexico State. San Luis Potosi. Veracruz. Guerrero, Jalisco, Michoacan. Chiapas, Tabasco.

Paspalum multinervium A.G.Burman. *Acta Bot. Venezuel.*, 14(4): 90 (1987).

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:** *Thrasya reticulata* Swallen, *Contr. U.S. Natl. Herb.* 29(6): 267–268 (1948) [1949]. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.R. Swallen 3665*, 1–5 Mar 1934, Brazil: Maranhão, between Barra do Corda and Grajahu (US-1612976).

Illustrations (Books): E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (635, Fig110 as *Thrasya reticulata*).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms 60–160 cm long. Culm-nodes bearded. Ligule an eciliate membrane, 1 mm long. Leaf-blades 40–70 cm long, 5–10 mm wide. Leaf-blade surface hirsute, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 16–21 cm long. Rhachis wingless, semiterete. Spikelet packing regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. 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, dorsally compressed, 3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–2 mm long, 0.15–0.7 length of spikelet, hyaline, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume lateral veins with cross-veins. Upper glume apex obtuse, mucronate, 3 -awned, awn subapical.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret oblong, 1 length of spikelet, coriaceous, 5 -veined, sulcate (readily splitting), acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 2.7 mm long, coriaceous, without keel. Lemma surface granulose. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. French Guiana. Bolivia.

Paspalum multinodum B.K.Simon. *Austrobaileya*, 3(4): 600 (1992).

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: Queensland: Cook Dist.: Aurukum, *Anon. s.n.* (HT: BRI-AQ540191; IT: CANB, K, L).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. multus*, many; *nodus*, knot. Culms many-noded.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 150–200 cm long, 10–13 -noded. Lateral branches lacking. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades 15–38 cm long, 2–5 mm wide. Leaf-blade margins smooth.

Inflorescence. Inflorescence composed of racemes. Racemes 2–6, digitate, unilateral, 3–8 cm long. Central inflorescence axis 0.5–1 cm long. Rhachis narrowly winged, flattened, 2 mm wide, smooth on margins. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3.5 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous, acute. Fertile lemma elliptic, 3 mm long, indurate, pallid or yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North.

Paspalum mutabile Chase. *Contrib. U. S. Nat. Herb.* xxviii. 61 (1929).

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: HT: A.S. Hitchcock 5773, 20 Jul 1910, Mexico: San Luis Potosí (US-928949; IT: US928947).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (97: 24, Fig.6 (2010)).

Derivation (Clifford & Bostock 2007): *L. changeable*. Variable in accord with the season or habitat.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending or decumbent, 20–40 cm long. Culm-internodes distally glabrous. Culm-nodes black, pubescent. Lateral branches lacking or sparse, arising from lower culm. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long, brown. Leaf-blades 5–15 cm long, 5–10 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, borne along a central axis, unilateral, 1.5–5.5 cm long. Rhachis wingless, angular, 1–1.5 mm wide. Spikelet packing abaxial, crowded. Spikelets solitary or in pairs. 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 orbicular, dorsally compressed, plano-convex, obtuse, 2 mm long, 1.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, dark brown or purple, without keels, 3–5 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, dark brown or purple, 3–5 -veined, obtuse. Fertile lemma orbicular, 2 mm long, indurate, yellow, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). **Continent.** North America, South America.

Country /Province /State. **Mexico.** Northeast Mexico, Southwest Mexico. **Western South America.** Colombia.

TDWG4. Hidalgo, San Luis Potosi, Tamaulipas. Oaxaca.

Paspalum nanum Wright ex Griseb. *Cat. Pl. Cub.* 230. (1866).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *C. Wright 176*, 1 Jun 1865, Cuba. Habana (GOET; IT: US-2942562 (fragm. & photo ex GOET)). ST: *C. Wright 3866*, 1865, Cuba (NY-71065).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (220, Fig. 164).

Derivation (Clifford & Bostock 2007): L. dwarf. Smaller than related species.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms erect or geniculately ascending, slender, 15–40 cm long. Culm-nodes pubescent. Leaf-sheaths pubescent, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long. Leaf-blades flat or involute, 3–13 cm long, 3–4.5 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight or arcuate, unilateral, 1.5–4 cm long. Rhachis wingless, semiterete. 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, plano-convex, acute, 2.4–2.8 mm long, 1.4–1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface wrinkled. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 2 mm long, 1.2 mm wide, indurate, yellow, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). **Continent.** South America.

Country /Province /State. **Caribbean.** Cuba.

Paspalum nelsonii Chase. *Contrib. U. S. Nat. Herb.* xxviii. 203 (1929).

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: HT: *E.W. Nelson 3047*, 21 Aug 1895, Mexico: Chiapas: Ocuilapa, on table-land, 1000–1200 m (US-233485).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Edward William Nelson (1855–1954) United States explorer and naturalist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 100–200 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 3 mm long. Leaf-blades 20–40 cm long, 12–15 mm wide. Leaf-blade surface pilose, hairy adaxially, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 18, borne along a central axis, drooping, unilateral, 8–12 cm long. Central inflorescence axis 3–6 cm long. Rhachis flattened, 1 mm wide, scabrous on margins, ciliate on margins. Rhachis hairs 5–7 mm long. Spikelet packing 4 -rowed. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, subacute, 2.1–2.3 mm long, 1.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume margins ciliate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous or puberulous, hairy at apex. Fertile lemma elliptic, 2 mm long, indurate, yellow, without keel. Lemma surface papillose or striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico.

TDWG4. Jalisco, Nayarit. Chiapas.

Paspalum nesioties Chase. *Contrib. U. S. Nat. Herb.* xxviii. 117 (1929).

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 Windward Is. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 16471, 18 Oct 1919, St. Lucia: near the Governor's residence (US-1060118).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (210, Fig. 148).

Derivation (Clifford & Bostock 2007): Gk islander. From St Lucia, one of the Leeward Islands.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, slender, 45–120 cm long. Lateral branches sparse, arising from mid culm. Leaf-sheaths as wide as blade at the collar, keeled, glabrous on surface. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades flat or conduplicate, 25–50 cm long, 6–11 mm wide, stiff. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–14, borne along a central axis, straight or arcuate, unilateral, 4–10 cm long. Rhachis wingless, angular, 0.8 mm wide. Spikelet packing crowded, irregular. Spikelets in pairs. 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 orbicular or obovate, dorsally compressed, plano-convex, obtuse, 1.9–2 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, light brown, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, light brown, 3 -veined, obtuse. Fertile lemma ovate, 1.8–1.9 mm long, indurate, pallid, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Windward Islands.

Paspalum nicorae L. Parodi. *Not. Mus. La Plata, Bot.*, viii. 82 (1943).

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).

TYPE from Uruguay. **Basionym or Replaced Name:** *Paspalum plicatulum* var. *arenarium* Arechav., *Anales Mus. Nac. Montevideo* 1: 58 (1894). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Arechavaleta s.n.*, Mar-Apr, Uruguay: frecuente en arenales de la costa del Rio de La Plata (MVM; IT: US-950735, W).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (329), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (585), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (983, Fig 194 & 986, Fig. 195), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (387, Fig. 161), B.Rosengurtt, *Gramineas Uruguayas I* (1970).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): in honor of Elisa Gernaela Nicora de Panza (1912-) Argentinian botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Butt sheaths sparsely hairy. Culms 20–70 cm long. Leaf-sheaths striately veined. Ligule an eciliate membrane, 0.5–2.5 mm long. Leaf-blades conduplicate, 4–5 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, borne along a central axis, unilateral, 1.5–6.5 cm long. Rhachis angular, 0.8 mm wide. Spikelet packing 2–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5–1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2.7–3.3 mm long, 1.6–1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, wrinkled, acute. Fertile lemma obovate, 2.5–3 mm long, 1.4–1.7 mm wide, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, obovoid, 1.8 mm long. Hilum elliptic. $2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Australasia (*), North America, South America.

Country /Province /State. **Australia.** New South Wales (*). **Southeastern USA.** Alabama, Florida, Georgia. **Brazil, Southern South America.** Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Coast. Catarina, Rio Grande do Sul. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Formosa, Santa Fe.

Paspalum niquelandiae T.S. Filgueiras. *Novon*, 5(1): 30 (1995).

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: Goiás: Municipio de Niquelândia, ca. 14.18'S-48.23'W, morro pedregoso, ca. 2 km Leste da localidade de Macedo, planta crescendo entre pedras, próximo a pequena floresta de galeria, ocasional na área, 19 Maio, 1993, *T.S. Filgueiras & F.C. de A. Oliveira 2461* (HT: IBGE; IT: F, G, ICN, K, MEXU, MG, MO, R, SI, SP, US).

Illustrations (Journals): *Novon* (5:31, Fig.1 (1995)).

Derivation (Clifford & Bostock 2007): From Municipio Niquelandia, Brazil.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short, knotty, scaly. Culms erect, 120–185 cm long, 5–8 -noded. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaves cauline. Leaf-sheaths striately veined, hispid, with tubercle-based hairs, outer margin hairy. Leaf-sheath oral hairs ciliate, 5–8 mm long. Ligule an eciliate membrane, 0.2–0.3 mm long, brown. Leaf-blades lanceolate, 20–45 cm long, 8–22 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface glabrous or hispid, with tubercle-based hairs. Leaf-blade margins serrulate, glabrous or ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle 12–22 cm long. Racemes 8–30, borne along a central axis, arcuate, unilateral, 2.5–8.5 cm long. Central inflorescence axis 9–15 cm long. Rhachis angular, 1–1.5 mm wide, glabrous on margins or ciliate on margins. Spikelet packing 4 -rowed. Raceme-bases pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.1–0.3 mm long, scabrous, 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 lanceolate or elliptic, dorsally compressed, plano-convex, acute, 2.3–3.3 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous to pubescent. Upper glume margins villous. Upper glume hairs 0.3–0.7 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous to pubescent. Fertile lemma elliptic, 2.2–2.7 mm long, chartaceous, pallid, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface papillose, with distinct germination flap. Lemma margins involute. Lemma apex acute. Palea involute, chartaceous.

Flower and Fruit. Lodicules 2, 0.1–0.2 mm long. Anthers 3, 1.2–2 mm long. Caryopsis with adherent pericarp, 1.8–1.9 mm long. Embryo 0.5–0.66 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central.

Paspalum notatum Fluegge. *Gram. Monog.* 106 (1810).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Virgin Is. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: West Indies: Virgin Islands: St. Thomas, 1802, *Ventenat s.n.* (LT: B; ILT: BM, KIEL, MO, P, SI, US).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (329), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (578), F.W.Gould, *The Grasses of Texas* (1975), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (203, Fig. 134), S.A.Renvoize, *Gramineas de Bolivia* (1998) (487, Fig. 105), S.A.Renvoize, *The Grasses of Bahia*, 1984 (210, Fig. 78), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (945, Fig. 190), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (as var. *notatum* & var. *latiflorum*), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (383, Fig. 159), W.Burger, *Flora Costaricensis* 15, *Gramineae: Fieldiana Botany New Series* 4 (1980) (428, Fig. 159), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (524, Fig. 137 as var. *latiflorum*), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (372, Fig. 161 as var. *notatum* & var. *latiflorum*), S-L Chen et al, *Flora of China*, *Illustrations, Poaceae* (2007) (Fig. 735), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:102(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass. Grasses of Australia. CD-Rom Version 1.0.* (2002);, F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. noto, mark. Spikelets multi-colored.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated. Culms 15–50 cm long. Ligule a fringe of hairs. Leaf-blades spreading, 2–30 cm long, 3–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–3), paired, unilateral, 2.5–12 cm long. Central inflorescence axis 0.5 cm long. Rhachis wingless, angular, 1 mm wide. Spikelet packing abaxial, regular, 2 -rowed. 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, dorsally compressed, plano-convex, obtuse, 2.5–3.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, cartilaginous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, cartilaginous, 1 -veined, without lateral veins, obtuse. Fertile lemma

ovate, gibbous, 2–3 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $N = 20$ (3 refs TROPICOS), $2n = 30$ (1 ref TROPICOS), or 40 (5 refs TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America, South America.

Country /Province /State. **West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa** (*), **Western Indian ocean.** Rwanda, DRC. Kenya, Tanzania, Uganda. Malawi, Zambia, Zimbabwe. Limpopo, Gauteng, Swaziland, Kwazulu-Natal, Lesotho, Western Cape. Madagascar (*). **China, Eastern Asia.** China South Central, China North-Central, China Southeast. Ogasawara-shoto. **Indian Subcontinent, Malesia, Papuasia.** Eastern Himalaya. Lesser Sunda Is, Philippines. Solomon Is (*). **Australia.** Western Australia (*), Queensland (*), New South Wales (*). **Southwestern Pacific.** Fiji (*). Easter Is. Marianas. Hawaii. **Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.

TDWG4. Gansu, Hebei. Fujian. Yunnan. Bhutan. Kimberley, South-West. North, Central, South East. Coast, Tablelands, Western Slopes. Amazonas, Acre, Rondonia, Goias, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Catamarca, Jujuy, La Rioja, Mendoza, Salta, Santiago del Estero, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Distrito Federal, Entre Rios, Formosa, La Pampa, Misiones, Santa Fe. Distrito Federal, Mexico State, Morelos, Puebla. Aguascalientes, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Veracruz. Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum nudatum Luces. *Journ. Wash. Acad. Sci.* ii. 163 (1942).

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: HT: *C.E. Chardon-Palacios s.n.*, 8 Aug 1940, Venezuela: Cojedes: Tinaquillo, alt. 422 m (VEN; IT: US-1817504).

Recent Synonyms: *Paspalum longiligulatum* Renvoize, *Kew Bull.* 27(3): 454 (1972).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (237, Fig. 191), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (493, Fig. 85).

Illustrations (Journals): *Ruizia* (13:363 Fig 46g-h (1993)).

Derivation (Clifford & Bostock 2007): *L. nudus*, bare; -ata, possessing. Spikelets lacking glumes.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 80 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 5–6 mm long. Leaf-blades involute, 10–25 cm long, 1 mm wide. Leaf-blade surface puberulous, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Peduncle 2–6 cm long. Racemes 2, paired, unilateral, 8–11 cm long. Central inflorescence axis 0 cm long. Rhachis 0.5 mm wide, smooth on margins. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.7–1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, compressed slightly, plano-convex, 1.3–1.6 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 1.3–1.6 mm long, indurate, pallid, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. **Northern South America, Western South America, Brazil.** Guyana, Surinam, Venezuela. Bolivia. Brazil West Central.

Mato Grosso.

Paspalum nummularium Chase ex T.Sendulsky & A.G.Burman. *Brittonia*, 32(4): 487 (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).

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: A. Chase 8436, 12 Feb 1925, Brazil: Rio de Janeiro, camino dos Macacos, Jardim Botânico do Alta Boa Vista (US-1255208; IT: SI).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. nummus*, coin; *-arium*, indicating connection. Sterile lemma with raised rims giving them a coin-like appearance.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes short. Culms geniculately ascending, 15–20 cm long. Leaf-sheaths longer than adjacent culm internode, keeled, glabrous on surface or pubescent. Ligule a ciliate membrane. Leaf-blades 4–20 cm long, 5–8 mm wide. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, erect or ascending, unilateral, 1.5–6 cm long. Rhachis narrowly winged, 0.8 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular, dorsally compressed, obtuse, 1.6–1.7 mm long, 1.4–1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma, shiny. Upper glume orbicular, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface smooth.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 3 -veined. Fertile lemma orbicular, 1.4 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast, Brazil South.

Paspalum nutans Lam. *Illustr. i.* 175 (1791).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from South America. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: L.C.M. Richard s.n., no date, South America (P-LA; IT: US-2942554 (fragm. & photo ex P)).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (399, Fig 151), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (208, Fig. 143), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1033 & 1034, Fig 201 & 202), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (432, Fig 160), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (503, Fig 86).

Derivation (Clifford & Bostock 2007): *L. nuto*, nod. Inflorescence branches slender, bending under the weight of the spikelets.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms geniculately ascending or decumbent, 25–90 cm long, without nodal roots or rooting from lower nodes. Culm-nodes glabrous or pubescent. Leaf-sheaths keeled, outer margin hairy. Ligule an eciliate membrane, truncate. Leaf-blades lanceolate, 3–16 cm long, 5–15 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 1(–4), single, arcuate, unilateral, 2–6 cm long. Rhachis narrowly winged, 0.5–0.7 mm wide. Spikelet packing crowded, regular, 1 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, obtuse, 1.8–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.75 length of spikelet, chartaceous, mid-green, without keels, 3–5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, chartaceous, 5 -veined, obtuse. Fertile lemma obovate, gibbous, 1.8–2 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, North America, South America.

Country /Province /State. **Western Indian ocean.** Mauritius (*), Madagascar (*), Rodrigues (*), Seychelles. **Mexico.** Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Leeward Is, Windward Islands, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Colombia, Ecuador. Brazil Northeast, Brazil Southeast, Brazil North, Brazil South.

TDWG4. Para, Amapa, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Chiapas, Quintana Roo.

Paspalum oligostachyum Salzm. ex Steud. *Syn. Pl. Gram.* 23 (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 Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *P. Salzmann s.n.*, no date, Brazil: Bahia (MPU; US-1298207 (fragm. ex P), G, MO-2977288, P).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (211, Fig. 149), S.A.Renouze, *The Grasses of Bahia*, 1984 (230, Fig. 85).

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, caespitose. Rhizomes short, knotty. Culms geniculately ascending or decumbent, 25–75 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, keeled, pubescent. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 8–25 cm long, 7–13 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, borne along a central axis, unilateral, 3–10 cm long. Central inflorescence axis 2–10 cm long. Rhachis wingless, angular. Spikelets in pairs. 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 obovate or rhomboid, dorsally compressed, plano-convex, obtuse, 2 mm long, 1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, dark green, without keels, 5–7 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, membranous, dark green, 5–7 -veined, puberulous, obtuse. Fertile lemma obovate, 2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. **Caribbean, Northern South America, Brazil.** Trinidad-Tobago. French Guiana, Surinam, Venezuela. Brazil Northeast.

TDWG4. Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum orbiculare G. Forst. *Fl. Ins. Austr.* 7 (1786).

Regarded by K as a synonym (*P. scrobiculatum*).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.Tsvelev, *Grasses of the Soviet Union* (1983).

TYPE from Society Is. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Society Islands; *Forster s.n.* (HT: GOET; IT: K) 'Insula Neu-Hannover, ad ripas, 24–7–75'.

Illustrations (Books): F.N.Hepper, *F.W.T.A.* 3(2) (1972) (447, Fig.443), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (588), C-C Hsu, *Taiwan Grasses* (1975), H.B.Gilliland, *Grasses of Malaya* (1971) (Pl. 15), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (109, Fig. 108), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (329).

Images: H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);

Derivation (Clifford & Bostock 2007): L. orbiculus, round; -are, pertaining to. Spikelets circular in outline.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Flower and Fruit. $N = 20$ (3 refs TROPICOS). $2n = 40$ (2 refs TROPICOS), or 60 (2 refs TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, Pacific.

Country /Province /State. **West tropical Africa, West-central tropical Africa.** Benin, Burkina, Gambia, Ghana, Ivory Coast, Liberia, Mali, Mauritania, Nigeria, Senegal, Sierra Leone, Togo. Cameroon, Bioko. **China, Eastern Asia.** China South Central, Hainan, China Southeast. Japan, Taiwan. **Indian Subcontinent, Indo-China, Malasia.** Nepal, Sri Lanka. Andaman Is, Thailand. Malaya, Singapore. **South-central Pacific.** Fiji (*), New Caledonia, Marquesas, Society Is. Hawaii.

TDWG4. Fujian, Guangdong, Guangxi, Jiangsu, Jiangxi, Zhejiang. Guizhou, Hubei, Sichuan, Yunnan.

Paspalum orbiculatum Poir. *Encyc. v. 32* (1804).

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 Puerto Rico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.P. Ledrú & E.P. Ventenat s.n., 1798, Puerto Rico (P-LA; IT: B, FI, P, US-2855756 (fragm. ex P-LA)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (225, Fig. 174), S.A.Renvoize, *Gramineas de Bolivia* (1998) (459, Fig. 99), S.A.Renvoize, *The Grasses of Bahia*, 1984 (230, Fig. 85), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (236, Fig. 190), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (433, Fig. 161).

Illustrations (Journals): *Ruizia* (13:366 Fig 471-o (1993)).

Derivation (Clifford & Bostock 2007): L. orbiculus, round; -ata, possessing. Spikelets circular in outline.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 5–13 cm long, 0.5–1 mm diam., rooting from lower nodes. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.1–0.2 mm long. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 1–6 cm long, 1–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 0.8–2.4 cm long. Central inflorescence axis 0.4–0.6 cm long. Rhachis narrowly winged, 0.5–0.7 mm wide. Spikelet packing abaxial, regular, 2-rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular, dorsally compressed, 0.9–1.2 mm long, 0.8–1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, without keels, 2-veined. Upper glume primary vein absent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 2-veined, without midvein, obtuse. Fertile lemma ovate, 0.9–1.2 mm long, indurate, red, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.3 mm long, purple. Caryopsis with adherent pericarp, orbicular, 0.7–0.8 mm long.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Australasia, North America, South America.

Country /Province /State. **New Zealand.** Kermadec Is, New Zealand North I. **Mexico.** Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Windward Islands, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil South. Paraguay.

TDWG4. Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso, Bahia. Corrientes, Entre Rios, Misiones. San Luis Potosi. Veracruz. Guerrero, Oaxaca. Chiapas, Tabasco.

Paspalum oreophilum A.G.Burman S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 513 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya oreophila* A.G.Burman, *Brittonia*, 34(4): 458 (1982).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–120 cm long. Culm-nodes bearded. Leaf-sheaths keeled, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 2 mm long, pilose on abaxial surface. Leaf-blades 6–30 cm long, 4–9 mm wide. Leaf-blade surface glabrous. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–3, single or borne along a central axis, arcuate, unilateral, 9–16 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 2 mm wide, glabrous on surface or puberulous on surface, tuberculate on margins, ciliate on margins, terminating in a barren extension, extension flattened. Rhachis hairs 5–10 mm long. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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 mm long, 1.4 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1.2 mm long, 0.33 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 0.75 length of spikelet, membranous, without keels, (5–)7 -veined. Upper glume lateral veins with cross-veins, all extending to apex or excurrent. Upper glume margins eciliate or ciliolate. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, coriaceous, sulcate or readily splitting into two halves, glabrous or pilose, hairy above, acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 3.5 mm long, coriaceous, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute, pubescent. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Paspalum orinocense S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 513 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *T. paspaloides*).

TYPE from Venezuela. **Basionym or Replaced Name:** *Thrasya paspaloides* Kunth, *Nov. Gen. Sp. (quarto ed.)* 1: 121, t. 39 (1815) [1816]

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Humboldt & Bonpland 16 1/2*, May, Venezuela (B-W-1618; ILT: US (fragm.)). LT designated by Burman, *Bot. J. Linn. Soc.* 82: 339–341 (1981).

Recent Synonyms: *Thrasya paspaloides* H. B. & K., *Nov. Gen. et Sp.* i. 121. t. 39 (1815).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (179, Fig. 114 as *Thrasya paspaloides*), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (285, Fig. 231 as *Thrasya paspaloides*).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Alto Orinoca, Venezuela.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–70 cm long. Culm-nodes bearded. Leaf-sheaths keeled, glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1.3 mm long, arose. Leaf-blades linear or lanceolate, 5–15 cm long, 2–3 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, arcuate, unilateral, 1–11 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 3 mm wide, glabrous on surface, tuberculate on margins, ciliate on margins, terminating in a barren extension, extension flattened. Rhachis hairs 3–4 mm long. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, 2.9–3.1 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 2.9–3.1 mm long, 1.1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose, hairy generally, with tubercle-based hairs. Upper glume margins ciliate. Upper glume hairs yellow, 1.5–2 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic or oblong, 2.9–3.1 mm long, 1 length of spikelet, chartaceous, sulcate or readily splitting into two halves, with basal tufts of hair, 1 hair tufts in all, ciliate on margins (above), acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 2–3 mm long, coriaceous, without keel. Lemma surface striate, with conspicuous apical hairs. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America, Western South America, Brazil. Venezuela. Colombia.

TDWG4.

Paspalum oteroi Swallen. *Phytologia*, xiv. 383 (1967).

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: *J. R. de Otero s.n.*, 15 Feb 1950, Brazil. Rio de Janeiro: cultivated at Secao Experimental de Agrostologia, "Km 47", Rio de Janeiro, from see from the Pantanal, Mato Grosso (US-2597973; IT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Jorge Bamos de Otero (fl. 1935) Brazilian botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 100–150 cm long, rooting from lower nodes. Culm-internodes similar in length, 6–10 cm long. Ligule an eciliate membrane. Leaf-blades 6–15 cm long, 3–5 mm wide. Leaf-blade surface glabrous, hairless throughout or except near base. Leaf-blade margins cartilaginous, scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–5, borne along a central axis, unilateral, 3–4 cm long. Central inflorescence axis 3–5 cm long. Rhachis narrowly winged, angular, 1 mm wide. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, subacute, 3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pubescent, acute. Fertile lemma elliptic, 2.8 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central. Mato Grosso.

Paspalum ovale Nees ex Steud. *Syn. Pl. Gram.* 22. (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Sellow 3521*, no date, Brazil (B; IT: LE TRIN-0456.01, US-929635).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. ovum*, egg; -ale, pertaining to. Spikelet elliptical in outline.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Basal innovations intravaginal. Culms 90–140 cm long, 3 mm diam., 3–4 -noded. Culm-nodes brown, glabrous. Lateral branches lacking. Leaf-sheaths 20–35 cm long, without keel or keeled, striately veined, smooth. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, brown. Leaf-blades linear or lanceolate, 30–50 cm long, 5–7 mm wide. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, borne along a central axis, arcuate, unilateral, 5–7 cm long. Central inflorescence axis 5–10 cm long. Rhachis angular, scabrous on margins. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 1–2 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, 4 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 3.25 mm long, 0.75 length of spikelet, membranous, pallid, without keels, 3 -veined. Upper glume surface asperulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, with unevenly spaced veins (near margin), obtuse. Fertile lemma elliptic, 3.5 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.8 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil Southeast, Brazil South. Paraguay.

TDWG4. Corrientes, Misiones.

Paspalum pallens Swallen. *Phytologia*, xiv. 365 (1967).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: A. Macedo 2167, 18 Feb 1950, Brazil: Minas Gerais (US-1982916 (photo, SI)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. pale. Inflorescences pale.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 30–80 cm long, spongy, rooting from lower nodes. Culm-internodes distally glabrous. Lateral branches ample. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, 5 mm long. Leaf-blades curved, flat or conduplicate, 8–20 cm long, 1–2 mm wide. Leaf-blade surface pubescent, densely hairy, hairy adaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 2.5–5 cm long. Central inflorescence axis 0 cm long. Rhachis angular, 0.5–0.6 mm wide, glabrous on surface. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, plano-convex, 2.5–3.4 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume lateral veins obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, obscurely veined. Fertile lemma oblong, 2.2–2.7 mm long, coriaceous, pallid, without keel. Lemma surface granulose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Bolivia. Brazil West Central, Brazil Southeast.

Paspalum pallidum H. B. & K. *Nov. Gen. et Sp.* i. 88. (1815).

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 Ecuador. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: F.W.H.A. von Humboldt & A.J.A. Bonpland s.n., Feb, Ecuador: Pichincha (B-W; IT: LE-TRIN-0506.01 (fragm.), P-BONPL, US-2942550 (fragm. ex B, P)). det Kunth 1836.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. pale-colored. Spikelets or grain pale-green.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms decumbent, 20–50 cm long. Culm-nodes glabrous. Ligule an eciliate membrane. Leaf-blades 4–14 cm long, 5–8 mm wide. Leaf-blade surface puberulous. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–17, borne along a central axis, unilateral, 2–3.5 cm long. Central inflorescence axis 2–7 cm long. Rhachis narrowly winged, 2.3–2.5 mm wide, glabrous on surface. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 2.7–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, 2.7–3 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Galapagos, Peru.

Paspalum palmeri Chase. *Contrib. U. S. Nat. Herb.* xxviii. 109 (1929).

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. **Basionym or Replaced Name:** *Paspalum setaceum* var. *pubiflorum* Vasey, *Contr. U.S. Natl. Herb.* 1(4): 114 (1891)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E. Palmer 704*, 16–30 Sep 1890, Mexico: Sonora: Alamos (US-951577; IT: W).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Edward Palmer (1831–1911) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms 80–100 cm long. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 3–4 mm long, brown. Leaf-blade base broadly rounded. Leaf-blades 8–20 cm long, 7–10 mm wide.

Inflorescence. Inflorescence composed of racemes, terminal or terminal and axillary. Racemes 1–3, single or borne along a central axis, unilateral, (3.5–)8–14 cm long. Rhachis wingless, angular. Spikelet packing crowded. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, subacute, 2.8–3.2 mm long, 1.5–1.6 mm wide, falling entire.

Glumes. Glumes one to two the lower present in some spikelets (the lower of the pair), reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.8–2.3 mm long, 0.5 length of spikelet. Lower glume margins ciliate. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, pubescent. Fertile lemma elliptic, 2.5 mm long, indurate, pallid, without keel. Lemma surface papillose or striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northwest Mexico, Southwest Mexico.

TDWG4. Morelos. Sonora. Jalisco.

Paspalum paludosum Swallen. *Phytologia* 14 379 (1967).

Regarded by K as a synonym (*P. plicatulum*).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.R. Swallen* 3959, 20–25 Mar 1934, Brazil: Maranhão (US-1613888).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. palus*, swamp; -osa, abundance. Growing in swampy places.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Paspalum palustre Mez. *Fedde, Repert.* xv. 69 (1917).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *B. Balansa* 88, 16 Apr 1874, Paraguay: Asuncion, Rio Paraguay (B; IT: G, K, L, P, US-2942549 (fragm. ex L, P)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. swampy place*. Growing in swampy places.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms 80–200 cm long, 2–5 -noded. Culm-nodes glabrous. Leaves without demarcation between sheath and blade. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2 mm long. Leaf-blades 20–40 cm long, 8–15 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 10–12, borne along a central axis, unilateral, 10–15 cm long. Central inflorescence axis 5–10 cm long. Rhachis angular. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, obtuse, 3–3.5 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins distinct. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, distinctly veined, glabrous, acute. Fertile lemma elliptic, 3–3.5 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central. Paraguay.

TDWG4. Chaco, Formosa.

Paspalum paniculatum L. *Syst. ed.* X. 855. (1759).

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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Jamaica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Jamaica:, *Browne s.n.* (LT: LINN-79.1).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (239, Fig 166), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (395, Fig 149), E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (139, Pl. 55), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (329), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (578), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (211, Fig. 150), S.A.Renouze, *Gramineas de Bolivia* (1998) (487, Fig. 107), S.A.Renouze, *The Grasses of Bahia*, 1984 (230, Fig. 85), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982)

(1051, Fig. 205 & 1062, Fig. 207), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (435, Fig. 162), B.Rosengurtt, *Gramineas Uruguayas* I (1970) (368, Fig. 159 as ssp. *umbrosum*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *L. panus*, thread; -ula, diminutive; -ata, possessing. Inflorescence open with thread-like pedicels.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–215 cm long. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 9–50 cm long, 6–25 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes few or numerous, 7–60, borne along a central axis, unilateral, 4–12 cm long. Central inflorescence axis 5–20(–30) cm long. Rhachis narrowly winged, angular, 0.5 mm wide. Spikelet packing regular, 4 -rowed. Spikelets in pairs. Fertile spikelets sessile and 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 orbicular, dorsally compressed, plano-convex, obtuse, 1.3–1.4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, dark brown, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, puberulous, obtuse. Fertile lemma orbicular, gibbous, hemispherical, 1–1.2 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 20$ (3 refs TROPICOS), or 40 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America, South America.

Country /Province /State. **West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa, Western Indian ocean.** Liberia. Cameroon, Gabon, Annobon, Principe & Sao Tome. Uganda. Mauritius (*), Madagascar (*), Reunion, Seychelles. **China, Eastern Asia.** Taiwan. **Malesia, Papuasia.** Philippines. New Guinea West Papua (Irian Jaya). New Guinea, Solomon Is (*). **Australia.** Queensland (*), New South Wales (*). **Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific.** Fiji (*), New Caledonia (*), Samoa (*), Tonga (*), Vanuatu (*), Wallis-Futuna Is (*). Cook Is (*), Easter Is (*), Marquesas (*), Society Is (*), Tubuai Is (*). Caroline Is (*), Marianas (*). Hawaii (*). **Southeastern USA, Mexico.** Florida, Mississippi. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador. Bahamas, Bermuda, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Galapagos, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Paraguay, Uruguay.

TDWG4. North, Central, South East. Coast, Western Slopes. Salta, Corrientes, Misiones. Mexico State, Morelos, Puebla. Aguascalientes, San Luis Potosi, Tamaulipas, Zacatecas. Veracruz. Baja California Sur, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum parviflorum Rhode ex Fluegge. *Gram. Monog.* 98. (1810).

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), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *comm. am Sprengel et Link 965*, s.d., Brazil: Sp-na, nisi fallor, Brasiliana (LE-TRIN-0504.01). with illustr.. HT: *Rhode s.n.*, no date, Puerto Rico (FI; IT: B-W, BM, US-2855752). probable isotype at P.

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (225, Fig. 171), S.A.Renvoize, *The Grasses of Bahia*, 1984 (214, Fig. 79), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (237, Fig. 192), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (410, Fig. 149), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (493, Fig. 85).

Derivation (Clifford & Bostock 2007): *L. parvus*, small; flos, flower. Spikelets small or with few florets.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms 5–14 cm long, 0.2–0.5 mm diam. Culm-internodes thick-walled, purple, distally glabrous. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule

an eciliate membrane, 0.1–0.2 mm long. Leaf-blades flat or conduplicate, 0.5–1 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–3, single or borne along a central axis, unilateral, 1–1.5 cm long. Central inflorescence axis 0–1 cm long. Rhachis wingless, angular, 0.3–0.4 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, 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 or obovate, dorsally compressed, obtuse, 0.6–0.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume primary vein absent. Upper glume margins ciliolate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 2 -veined, without midvein, with unevenly spaced veins (near margin), ciliolate on margins. Fertile lemma ovate, 0.6–0.7 mm long, indurate, yellow, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.3–0.5 mm long, orange. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil. Costa Rica. Puerto Rico. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil North.

TDWG4. Para, Amapa, Mato Grosso, Bahia.

Paspalum parvulum A.G.Burman) S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 513 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya parvula* A.G.Burman, *Brittonia*, 32(2): 217 (1980).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. parvus*, small; *-ula*, diminutive. Dwarf in habit.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–55 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths keeled, glabrous on surface or puberulous. Ligule an eciliate membrane, 2 mm long, erose. Leaf-blades 2.5–12 cm long, 1.5–2.5 mm wide. Leaf-blade surface puberulous, hairy on both sides. Leaf-blade margins glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, arcuate, unilateral, 2–4.5 cm long. Rhachis broadly winged, 3.5 mm wide, glabrous on surface, scaberulous on margins, terminating in a barren extension, extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly, 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 elliptic, dorsally compressed, acute, 1.4–1.6 mm long, 0.7 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.3 mm long, 0.2 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblate, 0.4 mm long, 0.25 length of spikelet, membranous, without keels, 1 -veined. Upper glume primary vein absent. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, chartaceous, sulcate, acute. Fertile lemma elliptic, 1.4–1.6 mm long, coriaceous, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea coriaceous. Palea surface papillose.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Paspalum pauciciliatum (L. Parodi) Herter. *Rev. Sudamer Bot.* vi. 139 (1940).

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 Uruguay. **Basionym or Replaced Name:** *Paspalum dilatatum* var. *pauciciliatum* Parodi, *Revista Mus. La Plata* 1: 240 (1937). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *B. Rosengurt B1005*, Jan 1937, Uruguay: Salto, Picada de Pereyra (BAA; IT: US-1648237, US-1648201).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (397, Fig. 166), B.Rosengurt, *Gramineas Uruguayas I* (1970) (374, Fig. 162).

Derivation (Clifford & Bostock 2007): *L. paucus*, few; *cilium*, hair; *-atum*, possessing. Glabrous or the lower internodes puberulent.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms geniculately ascending, 50–100 cm long, 4–5 -noded, rooting from lower nodes. Culm-internodes 1.5–7 cm long. Leaf-sheaths pilose. Ligule an eciliate membrane, 3–4 mm long, brown. Leaf-blades 8–30 cm long, 7–9 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, borne along a central axis, straight, unilateral, 4–9 cm long. Rhachis angular, 0.8–1.2 mm wide, drab, glabrous on margins. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 2.8–3.5 mm long, 1.5–1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2–2.5 mm long, 1.5 mm wide, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Salta. Corrientes, Entre Rios, Misiones.

Paspalum paucifolium Swallen. *Phytologia*, xiv. 372 (1967).

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: *F. Sellow s.n.*, no date, Brazil (US-1258166; IT: B, P).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Ilustrada Catarinensis Gramineas* (1981–1982) (983, Fig. 194), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (393, Fig. 164).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (91: 243: Fig.9 (2004)).

Derivation (Clifford & Bostock 2007): *L. paucus*, few; *folium*, leaf. Culms bearing few leaves.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes short, scaly, hairy. Culms geniculately ascending or decumbent, 40–70 cm long, 3 -noded. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths pilose. Ligule an eciliate membrane. Leaf-blades 6–12 cm long, 3–5 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, borne along a central axis, unilateral, 3–7 cm long. Central inflorescence axis 2–5 cm long. Rhachis narrowly winged, flattened, 1–1.5 mm wide, scabrous on margins. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, unequal, 0.5 mm long or 1–1.8 mm long, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, plano-convex, acute, 3.5–5 mm long, 1.3–1.6 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface villous. Upper glume hairs 1.5 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 3 -veined, glabrous or puberulous, ciliate on margins, acute. Fertile lemma lanceolate, 3.3–3.8 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Catarina, Rio Grande do Sul. Corrientes, Entre Rios, Misiones.

Paspalum peckii Hubbard. *Proc. Amer. Acad.* xlix. 495 (1913).

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: HT: *M.E. Peck 71*, 18 Jul 1905, Belize: pine ridge near Manatee Lagoon (GH; IT: US-2942524 (fragm. ex GH)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Morton Eaton Peck (1871–1951) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, 72–82 cm long. Culm-internodes distally glabrous. Culm-nodes pubescent. Leaf-sheaths keeled, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 2–3 mm long. Collar pubescent. Leaf-blades erect, flat or conduplicate, 14–30 cm long, 5–8 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface puberulous, sparsely hairy, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, arcuate, unilateral, 6–13 cm long. Central inflorescence axis 1–3.5 cm long. Rhachis narrowly winged, angular, 2 mm wide, with scattered hairs, scabrous on margins. Raceme-bases brief, pubescent. Spikelets in pairs. Fertile spikelets sessile and pedicelled. Pedicels present, 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 elliptic or obovate, dorsally compressed, concavo-convex, 2.7 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes one to two the lower present in some spikelets, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0–0.5 length of spikelet, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male or barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, hyaline, 5 -veined, concave across back, obtuse. Palea of lower sterile floret 1 length of lemma. Fertile lemma elliptic, 2.2 mm long, indurate, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Belize, Honduras.

Paspalum pectinatum Nees. *Trin., Gram. Icon.* 1:Pl.117 (1828).

Accepted by: 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: *Sellow s.n.*, [mis. Schlechtendal] 1827, Brasilia: in campis siccis (LE-TRIN-0505.01; IT: B, G, K, LE-TRIN-0505.02, LE-TRIN-0505–03, SI (photo ex K), US-2942525 (fragm.), W).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (452, Fig 98), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (918 & 926, Fig 184 & 186), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (437, Fig 163), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (469, Fig 83), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (67, Fig. 38).

Derivation (Clifford & Bostock 2007): *L. pecten*, comb; -ata, possessing. The margins of the sterile lemmas bear a series of stiff hairs.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms 30–100 cm long, 1.5–2.5 mm diam. Culm-internodes thin-walled, distally glabrous. Lateral branches lacking. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate, 4–8 mm long. Ligule an eciliate membrane, 0.5–1 mm long, brown. Leaf-blades revolute, 11–65 cm long, 3–7 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Peduncle pubescent above. Racemes 2, paired, unilateral, 5–7 cm long. Rhachis broadly winged, membranous, 2–2.5 mm wide, pubescent on margins, terminating in a barren extension, extension flattened. Spikelet packing abaxial, 2 -rowed. 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, with cordate base, dorsally compressed, 4.6–5.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, auriculate at base, 1 length of spikelet, membranous, without keels, winged on margins, winged all along, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 0.9 length of spikelet, membranous, 3 -veined, glabrous or pilose, with tubercle-based hairs, tuberculate on margins, ciliate on margins, fringed all along, bearing hairs 1.5–2 mm long, acute. Fertile lemma ovate, 3.5–4.5 mm long, coriaceous, pallid, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, coriaceous.

Flower and Fruit. Anthers 3, 2.2 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Southeast, Brazil North, Brazil South.

TDWG4. Mato Grosso, Goias, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Veracruz. Oaxaca. Chiapas, Tabasco.

Paspalum penicillatum Hook. f. *Trans. Linn. Soc.* xx. 171. (1847).

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 Ecuador: Galapagos Islands. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *C. Darwin s.n.*, Sep 1835, Ecuador: Galapagos Islands: Charles Island (CGE; ILT: K, US-2942530 (fragm. ex K)). LT designated by Porter, *Bot. J. Linn. Soc.* 81: 96 (1980).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (462, Fig 100).

Derivation (Clifford & Bostock 2007): *L. penicillus*, a small brush; -ata, possessing. With racemes arising in verticils.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 7–20 cm long. Lateral branches ample. Ligule an eciliate membrane. Leaf-blades lanceolate, 3–10 cm long, 5–12 mm wide. Leaf-blade surface pubescent, moderately hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 3–9, borne along a central axis, unilateral, 1–1.7 cm long. Rhachis deciduous from axis, narrowly winged, 1.7 mm wide, terminating in a barren extension, extension flattened. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 1.7–1.9 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, sulcate, acute. Fertile lemma elliptic, 1.7–1.9 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America. Venezuela. Bolivia, Colombia, Ecuador, Peru.

Paspalum petilum Chase. *Journ. Wash. Acad. Sc.* xxvii. 145. (1937).

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: HT: A.W. Bartlett 8569, Sep 1906, Guyana: Essequibo, Konawaruk R. (US-1298462; IT: K).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (232, Fig. 180), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (503, Fig 86).

Derivation (Clifford & Bostock 2007): L. slender. Culms very slender.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms rambling, 15–22 cm long, rooting from lower nodes. Culm-nodes bearded. Leaf-sheaths outer margin hairy. Ligule an eciliate membrane, 1–1.3 mm long, acute. Leaf-blades 6–11 cm long, 3.5–4.5 mm wide.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Peduncle 2–5 cm long. Racemes 1, single, arcuate, unilateral, 1–2.2 cm long. Rhachis angular, 0.4–0.6 mm wide, smooth on margins. Spikelet packing 2-rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.4–0.7 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, acute, 1.4–1.7 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.3–0.4 mm long, 0.2–0.3 length of spikelet. Lower glume margins ciliolate. Lower glume apex obtuse. Upper glume elliptic, 0.9–1.3 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 5-veined. Upper glume surface pubescent, hairy on veins. Upper glume margins ciliolate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3-veined, ciliolate on margins. Fertile lemma elliptic, 1.3–1.6 mm long, indurate, yellow, without keel. Lemma surface granulose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Brazil North.

Paspalum petrense A.G.Burman. *Kew Bull*, 35(2): 297 (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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: T. S. Filgueiras & A. G. Burman 430, 8 Apr 1979, Brazil. Goias: Serra dos Pirineus, ca. 20 km E of Pirenopolis (K; IT: IBGE, SP, RB-217458).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. petra, rock; -ense, denoting origin. Growing amongst exposed rocks.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–80 cm long. Culm-internodes distally glabrous or pilose. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long, truncate. Leaf-blades 10–17 cm long, 2–5 mm wide. Leaf-blade surface pubescent, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, borne along a central axis, straight or arcuate, unilateral, 3–6 cm long. Rhachis broadly winged, foliaceous, 7 mm wide, dark-coloured (green to purple). Spikelets in pairs. Fertile spikelets pedicelled, subequal or the lower smaller. Pedicels present, flattened, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3.5 mm long, 1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface scabrous, rough at apex, hirsute, hairy below. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, hirsute, hairy below, ciliate on margins, acuminate. Fertile lemma elliptic, 3 mm long, cartilaginous, pallid, shiny, without keel. Lemma margins involute. Lemma apex pubescent. Palea involute, cartilaginous.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Paspalum petrosum Swallen. *Phytologia*, xiv. 362 (1967).

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: *C.O. Grassl 10015*, 24 Jul 1943, Colombia. Vaupes: Cerro Camejen (US-1910825).

Recent Synonyms: *Thrasya petrosa* (Trin.) Chase, *Proc. Biol. Soc. Washington* 14: 115 (1911).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (510, Fig. 114 as *Thrasya petrosa*), S.A.Renvoize, *The Grasses of Bahia*, 1984 (239, Fig. 89 as *Thrasya petrosa*), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (284, Fig. 229 as *Thrasya petrosa*).

Derivation (Clifford & Bostock 2007): L. *petra*, rock; -osa, full of. Growing in rocky places.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent (tomentose). Culms erect, 70–85 cm long. Culm-internodes distally glabrous. Leaf-sheaths pilose. Ligule an eciliate membrane. Leaf-blades curved, involute, 15–35 cm long. Leaf-blade surface pubescent, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 5–8, borne along a central axis, unilateral, 4–5 cm long. Central inflorescence axis 4–8 cm long. Rhachis narrowly winged, angular, 0.4–0.5 mm wide, glabrous on surface. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5 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 obovate, dorsally compressed, plano-convex, subacute, 1.8–1.9 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume primary vein conspicuous. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, with conspicuous midvein, glabrous, acute. Fertile lemma elliptic, 1.8–1.9 mm long, indurate, shiny, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Colombia. Brazil West Central, Brazil Northeast, Brazil North.

TDWG4. Roraima, Mato Grosso, Goias, Bahia, Maranhao, Piaui.

Paspalum phaeotrichum Valls, G.H. Rua & Graciano-Ribeiro & R.C. Oliveira,.

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Bahia: Mun. Riachã das Neves, entrada de fazenda ca. 20 km N de Barreiras pela estrada antiga, 2 km N da ponte sobre o Rio Branco, 31 Mar 1983, *J.F.M. Valls, A. Krapovickas, R.F.A. Veiga, & G. Pereira-Silva 7049* (HT: CEN; IT: BAA, L, RB, SI, US).

Illustrations (Journals): *Systematic Botany* (33: 268, Fig.1 (2008)).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending or decumbent, 18–28 cm long, 0.8–0.9 mm diam., rooting from lower nodes. Culm-internodes distally glabrous. Culm-nodes purple, glabrous. Leaf-sheaths 1–6 cm long, keeled, striately veined, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.5–0.7 mm long, erose, acute. Leaf-blades lanceolate, 4.5–5.5 cm long, 2 mm wide. Leaf-blade surface ribbed, grooved adaxially. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle 4.5–9 cm long, glabrous. Racemes 2, paired, flexuous, unilateral, 2–4 cm long. Rhachis narrowly winged, angular, 0.4 mm wide, glabrous on surface. Spikelet packing abaxial, lax, 2-rowed. Raceme-bases hirsute. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, plano-convex, acute, 4–4.1 mm long, 1.1–1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 4–4.1 mm long, 1 length of spikelet, membranous, without keels, 7-veined. Upper glume surface pilose, hairy below. Upper glume margins ciliate. Upper glume hairs tawny, 1–3 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 4 mm long, 1 length of spikelet, membranous, 5-veined, pilose, hairy below, acute. Fertile lemma elliptic, 3.1–3.3 mm long, 1–1.1 mm wide, cartilaginous, pallid, without keel, 5-veined, more than 3-veined. Lemma surface glabrous. Lemma margins involute. Palea separating from lemma above, involute, coriaceous.

Flower and Fruit. Lodicules 2. Anthers 3, 2.1–2.2 mm long, yellow. Caryopsis with adherent pericarp, obovoid, dorsally compressed, plano-convex, 1.8 mm long, pallid, emarginate. Hilum elliptic or linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Paspalum phyllorhachis Hack. *Oesterr. Bot. Zeitschr.* 51:240 (1901).

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: *A.F.M. Glaziou 20078*, 29 Apr 1872, Brazil: Minas Gerais (W; IT: B, K, SI (photo ex K, US), US-1162933 (ex P-Haun. hb)), US-2855768 (fragm. ex W)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. phyllon, leaf; rhachis, backbone. Rhachis winged.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, robust, 35–70 cm long. Lateral branches sparse. Ligule an eciliate membrane, truncate. Collar pubescent. Leaf-blade base broadly rounded. Leaf-blades linear or lanceolate, 6–12 cm long, 12 mm wide, stiff. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 6–8, borne along a central axis, unilateral, 3–4 cm long. Central inflorescence axis 6–12 cm long. Rhachis broadly winged, membranous, 5 mm wide, dark-coloured (purple). Spikelet packing 4-rowed. Raceme-bases brief, hirsute. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3-veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3-veined, acute. Fertile lemma lanceolate, 2 mm long, indurate, pallid, shiny, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.
Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum pictum Ekman. *Arkiv Bot. Stockh.* x. No. 17, 11 (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. O. A. Malme 3222*, 2 May 1903, Brazil: Mato Grosso, Cuiaba (S; IT: US-702287, US-2942515 (fragm. ex S)).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (234, Fig. 184), E.Judziwicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (493, Fig. 85).

Derivation (Clifford & Bostock 2007): L. painted. Glumes and/or lemmas with conspicuous pigmented veins or margins.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms 25–60 cm long, 1 mm diam. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous. Leaves without demarcation between sheath and blade. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, 1–2.2 mm long, brown. Leaf-blades conduplicate, 10–20 cm long, 1.5–3 mm wide. Leaf-blade margins tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 1–3, single or paired or borne along a central axis, arcuate, unilateral, 3–7 cm long. Central inflorescence axis 0.5–3 cm long. Rhachis wingless, flattened, 0.7 mm wide. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.6 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, gibbous, 1–1.1 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.9 length of spikelet, membranous, mid-green or purple, without keels, 0–3 -veined. Upper glume primary vein absent or distinct. Upper glume lateral veins absent or distinct.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 0.9 length of spikelet, membranous, 4–5 -veined, with unevenly spaced veins (near margins). Fertile lemma ovate, gibbous, 1–1.1 mm long, indurate, pallid, without keel. Lemma surface tuberculate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.2–0.3 mm long, purple. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, Brazil. Bolivia, Colombia. Brazil West Central, Brazil Southeast, Brazil North.

Goias, Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum pilgerianum Chase. *Contrib. U. S. Nat. Herb.* xxiv. 445 (1927).

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 Ecuador. **Basionym or Replaced Name:** *Paspalum bonplandianum* var. *glabrescens* Pilg., *Bot. Jahrb. Syst.* 27(1–2): 17–18 (1899). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: M.A. Stübel 102, Mar 1871, Ecuador: Pichincha: San Pablo Urcu, Monte Cusin (B; IT: US-2942158 (fragm. ex B & photo)).

Illustrations (Journals): *Ruizia* (13:370 Fig 48e-f (1993)).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Robert Knuds Friedrich Pilger (1876–1953) German agrostologist, born on Helgoland before its transfer from British to German administration.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect or geniculately ascending, 10–35 cm long. Lateral branches lacking. Leaves mostly basal. Ligule an eciliate membrane. Leaf-blades 2–10 cm long, 2–5 mm wide. Leaf-blade surface puberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–10, borne along a central axis, unilateral, 0.5–1 cm long. Central inflorescence axis 2–4 cm long. Rhachis narrowly winged, 1.5–2 mm wide, glabrous on surface. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 2.1–2.4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, 2–2.2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.

Paspalum pilosum Lam. *Illustr.* 1: 175 (1791).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from South America. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: L.C.M. Richard s.n., no date, South America (P-LA; IT: US-2942529 (fragm. & photo ex P-LA)).

Recent Synonyms: *Thrasya thrasyoides* (Trin.) Chase, *Proc. Biol. Soc. Washington* 14: 114 (1911). *Paspalum peregrinum* A.G. Burm. & Filg., *Acta Bot. Venez.* 14(4): 91 (1985) [1987].

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (209, Fig. 145), S.A.Rennoize, *The Grasses of Bahia*, 1984 (232, Fig. 86), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (232, Fig. 181), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (439, Fig 164), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (503, Fig. 86).

Illustrations (Journals): *Ruizia* (13:366 Fig 47a-c (1993)).

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 Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 50–130 cm long, 1–3 mm diam. Culm-internodes thin-walled, distally glabrous to pilose. Culm-nodes glabrous or bearded. Lateral branches sparse. Leaf-sheaths keeled, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Leaf-sheath oral hairs ciliate, 3–6 mm long. Ligule an eciliate membrane, 0.6–2.5 mm long, brown. Collar glabrous or bearded. Leaf-blades 10–25 cm long, 5–10 mm wide. Leaf-blade midrib conspicuous, keeled beneath. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Peduncle glabrous or pubescent above. Racemes 1, single, arcuate, unilateral, 6–12 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 1–1.5 mm wide, ciliate on margins. Spikelet packing irregular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 1 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 obovate, dorsally compressed, plano-convex, 2.6–3.2 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate or oblate, 0.5–2 mm long, 1 -veined. Lower glume lateral veins absent. Upper glume ovate, 2.4–3 mm long, 0.8–0.9 length of spikelet, membranous, without keels, 5 -veined.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 4–5 -veined, without midvein or with evident midvein. Fertile lemma ovate, 2.5–2.8 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1–1.2 mm long, purple. Caryopsis with adherent pericarp. $2n = 80$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Hawaii (*). **Mexico.** Central Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Puerto Rico, Trinidad-Tobago. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South.

TDWG4. Mato Grosso, Goias, Bahia, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana. Mexico State. Veracruz. Michoacan, Oaxaca. Chiapas, Tabasco.

Paspalum pisinnum Swallen. *Phytologia*, xiv. 360 (1967).

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: J.R. Swallen 4217, 4 Apr 1934–5 Apr 1934, Brazil: Piaui, Fazenda Nacional to Picos (US-01613175; IT:US-3382039). OS.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. little*. Tiny in comparison with related species.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 15–27 cm long. Culm-internodes distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane, 3 mm long. Leaf-blades 5–10 cm long, 2–3 mm wide. Leaf-blade surface

scabrous, rough on both sides, glabrous, hairless except near base. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–7, digitate, appressed or ascending, unilateral, 2–2.5 cm long. Central inflorescence axis 2 cm long. Rhachis angular, 0.5 mm wide, puberulous on surface, scabrous on margins. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, obtuse, 1.6–1.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface scabrous, rough on veins. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, scabrous, rough on veins, obtuse. Fertile lemma elliptic, 1.6–1.7 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Paspalum planum Hack. *Bull. Herb. Boiss. Ser. II. vii. 448* (1907).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E. Hassler 9647*, Nov, Paraguay. Caaguazú: in campis in regiones fluminis Ihu (W; IT: BAA, BM, G, K, P, US-2855825, W).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Butt sheaths pubescent. Culms erect, 80–150 cm long, 3 -noded. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2–3 mm long, acute. Leaf-blades conduplicate, 1–1.5 mm wide, stiff. Leaf-blade surface glabrous, hairless throughout or except near base.

Inflorescence. Inflorescence composed of racemes. Racemes 4–5, borne along a central axis, unilateral, 2–3 cm long. Central inflorescence axis 1–2 cm long. Rhachis angular, 0.7–0.8 mm wide. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 1 mm long or 2 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 4–5 mm long, 2–2.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, purple, without keels, 3 -veined. Upper glume lateral veins prominent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, purple, 3 -veined, prominently veined, acuminate. Fertile lemma elliptic, 2–3 mm long, indurate, without keel, 3 -veined, 0–3 -veined. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil Northeast, Brazil Southeast. Paraguay.

Paspalum plenum Chase. *Contrib. U. S. Nat. Herb. xxviii. 202* (1929).

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: HT: *A.S. Hitchcock 6643*, 3 Sep 1910, Mexico: Veracruz: near Jalapa (US-951959; IT: MO-3326813).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. plenus*, bulky. Culms tall and densely tufted.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths spongy. Culms erect, robust, 90–250 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths as wide as blade at the collar, keeled, reticulately veined, glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 2.5–3 cm long, 1.3–1.5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins spinulose. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 25–90, borne along a central axis, drooping, unilateral, 2–18 cm long. Rhachis wingless, angular, 1.2–1.5 mm wide, ciliate on margins. Rhachis hairs 5–8 mm long. Spikelet packing crowded. Raceme-bases brief, hirsute. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, subacute, 2.5–3 mm long, 1.3–1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, dark brown, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, dark brown, 3 -veined, concave across back, glabrous or puberulous, acute. Fertile lemma elliptic, 2.4–2.5 mm long, indurate, yellow, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil, Southern South America.** Costa Rica, Guatemala, Honduras, Nicaragua, Panama. French Guiana, Venezuela. Colombia, Ecuador, Peru. Brazil West Central, Brazil North, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Salta. Chaco, Corrientes, Formosa, Misiones. Mexico State, Morelos. Veracruz. Colima, Jalisco, Nayarit. Chiapas.

Paspalum pleostachyum Doell. *Mart. Fl. Bras.* ii. II. 58. (1877).

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. Salzmann* 665, 1830, Brazil: Bahia (G: IT: US-1385530).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (596), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (216, Fig. 157), S.A.Renvoize, *The Grasses of Bahia*, 1984 (210, Fig. 78).

Derivation (Clifford & Bostock 2007): Gk. pleios, several; stachys, ear of corn. The inflorescence has several racemes.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 40–100 cm long. Culm-nodes brown, glabrous. Lateral branches lacking. Leaf-sheaths as wide as blade at the collar, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1 mm long. Collar pilose. Leaf-blades flat or conduplicate, 12–55 cm long, 4–8 mm wide. Leaf-blade surface scabrous, rough on both sides, puberulous, hairy adaxially or on both sides. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Peduncle smooth or scaberulous above. Racemes 3–15, borne along a central axis, straight, unilateral, 7–14 cm long. Central inflorescence axis 4–11 cm long. Rhachis wingless, angular, scabrous on margins. Spikelet packing crowded, irregular. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 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 elliptic or obovate, dorsally compressed, plano-convex, subacute, 2.2–2.5 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 2–3 -veined, without midvein or with evident midvein,

obtuse. Fertile lemma elliptic, 2.1 mm long, 1 mm wide, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Southeastern USA. Florida. **Caribbean, Brazil.** Cuba, Haiti, Windward Islands. Brazil Northeast, Brazil North.

TDWG4. Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe.

Paspalum plicatum Michx. *Fl. Bor. Am.* i. 45 (1803).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from USA. **Basionym or Replaced Name:** *Paspalum compressifolium*, *P. limbatum*. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Michaux s.n.*, USA: in Georgia or Florida (P-MICHX; IT: US-2942519 (fragm. ex P-MICHX)).

Illustrations (Books): H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (109, Fig. 109), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (583), F.W.Gould, *The Grasses of Texas* (1975) (519, Fig. 273), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (236, Fig. 187), S.A.Renvoize, *The Grasses of Bahia*, 1984 (216, Fig. 80), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (983, Fig. 194 & 986, Fig. 195), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (387, Fig. 161), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (441, Fig. 165), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (528, Fig. 138), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (358, Fig. 153 as ssp. *guenoarum* & ssp. *montevidense*), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (467, Fig. 82), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 737), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:104(1980)).

Illustrations (Journals): *Ruizia* (13:375 Fig 49d-g (1993)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *L. plicatus*, folded; -ulum, tending towards. The sterile lemma is transversely wrinkled.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect or geniculately ascending, 30–120 cm long. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades flat or conduplicate, 15–30 cm long, 2–7 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, borne along a central axis, unilateral, 2–15 cm long. Central inflorescence axis 3–15 cm long. Rhachis wingless, angular, 1 mm wide. Spikelet packing irregular, 2–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, obtuse, 2.3–3.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, thicker on margins, 5 -veined, wrinkled, glabrous or puberulous, obtuse. Fertile lemma ovate, gibbous, 2–3 mm long, indurate, dark brown, without keel. Lemma surface granulate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $N = 20$ (1 ref TROPICOS). $2n = 20$ (2 refs TROPICOS), or 40 (4 refs TROPICOS).

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia, Australasia (*), North America, South America.

Country /Province /State. China. China North-Central. **Indian Subcontinent, Papuasias.** India. New Guinea. **Australia.** Western Australia (*), Northern Territory (*), Queensland (*). Fiji (*), New Caledonia. **South-central USA, Southeastern USA, Mexico.** Texas. Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Bahamas, Bermuda, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico,

Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.

TDWG4. Gansu (+). Kimberley. Darwin & Gulf. North, Central, South East. Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso, Goias, Bahia, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Jujuy, La Rioja, Salta, Santiago del Estero, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Misiones, Santa Fe. Mexico State, Morelos, Puebla. Aguascalientes, Chihuahua, Durango, Guanajuato, Hidalgo, San Luis Potosi, Tamaulipas, Zacatecas. Veracruz. Sinaloa. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo.

Paspalum plowmanii Morrone & Zuloaga. *Syst. Bot.* 38:307 (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).

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Brazil: Goiás: Mun. Babaçulândia, 18 km SW of Wandelandia along Belém-Brasília highwat (BR-153), 6°56'S, 48°05'W. 420 m, open cerrado with scattered trees on sandy soil, dominant grass *Mesosetum* sp., 26 Feb 1980, T. Plowman, G. Davidse, N.A. Rosa, C.S. Rosário & M.R. dos Santos 9173 (HT: MG; IT: MO).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Timothy C. Plowman (1944–1989) who collected in Brazil.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 50 cm long. Culm-internodes terete or elliptical in section, 4–20 cm long, distally glabrous. Culm-nodes glabrous. Lateral branches sparse or ample, arising from mid culm and upper culm. Leaf-sheaths 4–15 cm long, mostly shorter than adjacent culm internode, keeled, glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1–2.5 mm long, brown. Leaf-blades ascending, flat or involute, 5–20 cm long, 4–7 mm wide. Leaf-blade surface glabrous or pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 1(–2), single, unilateral, 5–12 cm long. Rhachis angular, 0.5–1.5 mm wide, glabrous on surface, scabrous on margins. Spikelet packing irregular, 4-rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, subequal, scaberulous, bearing a few hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, 3.2–4.4 mm long, 2–3.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic or obovate, 2.8–4 mm long, 0.75 length of spikelet, membranous, without keels, 5(–7) -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic or obovate, 1 length of spikelet, membranous, 5(–7) -veined, wrinkled, glabrous. Fertile lemma elliptic, 3.2–4.2 mm long, 2–2.8 mm wide, indurate, light brown, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Lodicules 2, cuneate, 0.4 mm long, fleshy. Anthers 3, 2–2.4 mm long. Caryopsis with adherent pericarp, ellipsoid or orbicular, plano-convex, 2–3.2 mm long, pallid. Embryo 0.5 length of caryopsis. Hilum linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil North.

Paspalum polyphyllum Nees ex Trin. *Gram. Panic.* 114 (1826).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *G.H. von Langsdorff s.n.; Nees mis.*, 1824, Brasilia: in campis siccis pr.Mariannam (LE; IT: K, SI (photo ex K, US), US-2855764 (fragm. ex LE)).

Recent Synonyms: *Paspalum bicilium* Mez, *Repert. Spec. Nov. Regni Veg.* 15: 27 (1917)

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (222, Fig. 82), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (918, Fig. 184), A.Burkat,

Flora Illustrada de Entre Rios (Argentina), Pt II, Gramineas (1969) (393, Fig. 164), B.Rosengurtt, *Gramineas Uruguayas I* (1970).

Derivation (Clifford & Bostock 2007): Gk. polys, several; phyllon, leaf. Culms many-leaved in comparison with related species.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Rhizomes elongated. Basal innovations extravaginal. Culms erect, 40–65 cm long. Culm-internodes distally glabrous or pubescent. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1 mm long. Leaf-blades lanceolate, 3.5–7 cm long, 2–8 mm wide, stiff. Leaf-blade surface pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–4, single or paired or digitate, unilateral, 4–7.5 cm long. Rhachis narrowly winged, flattened, 1.6 mm wide, pubescent on surface. Spikelet packing 2–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, puberulous, 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 ovate, dorsally compressed, turgidly plano-convex, 3.5 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume primary vein pubescent (below). Upper glume margins tuberculate, ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 0.9 length of spikelet, membranous, 3 -veined, ciliate on margins, acute. Fertile lemma elliptic, 2.8 mm long, indurate, without keel. Lemma surface puberulous, hairy in the middle. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, obovoid. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Mato Grosso, Goias, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Salta. Chaco, Corrientes, Entre Rios, Misiones.

Paspalum pontanalis Michx. Fl. Bor. Am. i. 45 (1803).

Regarded by K as a synonym (*P. plicatulum*).

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. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 11080*, 28 Feb 1930, Brazil: Mato Grosso (US-1448664).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Portuguese *pontanal*, marsh. L. *-alis*, pertaining to. Growing in swampy places.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central.

Paspalum praecox Walt. Fl. Carol. 75 (1788).

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>: *vide* TROPICOS and Kew Synonymy Database: type not known.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (598), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (64, Fig. 36).

Derivation (Clifford & Bostock 2007): L. early. Flowering early in the spring.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms 50–100 cm long. Leaf-sheaths keeled, glabrous on surface or hirsute. Ligule an eciliate membrane, 2–2.5 mm long. Leaf-blades 15–25 cm long, 3–7 mm wide. Leaf-blade surface glabrous or hirsute, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, borne along a central axis, unilateral, 2–7 cm long. Rhachis wingless, flattened. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 0.2–1 mm long, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular or obovate, dorsally compressed, 2.2–3.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, without keels, 3 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3–5 -veined, with unevenly spaced veins (near margins). Fertile lemma ovate, 2.2–3.2 mm long, indurate, light brown, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA, Southeastern USA. Texas. Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, South Carolina.

Paspalum procerum S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 517 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya hitchcockii*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya hitchcockii*).

TYPE from Panama. **Basionym or Replaced Name:** *Thrasya hitchcockii* Chase, *Journ. Wash. Acad. Sc.* xvii. 142. (1927). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *A.S. Hitchcock 8140*, 16 Sep 1911, Panama: Prov. Panamá: Chorrera, collected at the edge of a copse, on a hill (US-1269446).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. tall. Culms tall.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 50–100 cm long. Culm-internodes distally glabrous or pilose. Culm-nodes pubescent. Leaf-sheaths keeled, glabrous on surface or hirsute, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1 mm long, truncate. Leaf-blades linear or lanceolate, 12–30 cm long, 4–6 mm wide. Leaf-blade surface pubescent or pilose, hairy on both sides. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, arcuate, unilateral, 9–13 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 2 mm wide, glabrous on surface, glabrous on margins or ciliate on margins (sparsely), terminating in a barren extension, extension flattened. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3.5 mm long, 1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure or two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.3(–2) mm long, 0.1–0.3 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 3.5 mm long, 1 length of spikelet, chartaceous, without keels, 5 -veined. Upper glume surface glabrous or pilose, hairy at apex. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, coriaceous, readily splitting into two halves, glabrous or pubescent, hairy at apex, eciliate on margins, acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 3 mm long, coriaceous, without keel. Lemma surface papillose or striate. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America. Costa Rica, Panama. Venezuela.

Paspalum procurrens C.L.Quarin. *Bol. Soc. Argent. Bot.*, 29 (1993).

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: HT: *C. Saravia Toledo 2068*, 14 Apr 1989, Argentina: Salta: Anta Dept.: 10 km al sur de Joaquín V. González, finca Pozo Largo, suelos arenosos, 340 m (CTES; IT: BAA, K, SI, US-3329123).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. procurro*, project. The inflorescence projects beyond the leaf-sheath.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms 45–85 cm long, 2–3 mm diam., 2–3-noded, rooting from lower nodes. Leaf-sheaths pilose, with tubercle-based hairs, hairs white. Ligule an eciliate membrane, 1 mm long. Leaf-blade base broadly rounded. Leaf-blades 5–20 cm long, 0.5–2 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy abaxially. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 13–21, borne along a central axis, unilateral, 0.5–7 cm long. Central inflorescence axis 7–18 cm long. Rhachis angular. Spikelets in pairs. 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, dorsally compressed, concavo-convex, 2–2.2 mm long, 1 mm wide, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3-veined, obtuse. Fertile lemma elliptic, 2–2.2 mm long, indurate, without keel, 7-veined, more than 3-veined. Lemma lateral veins distinct. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, ellipsoid, 1.3–1.6 mm long. Embryo 0.5 length of caryopsis.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG), Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia.

TDWG4. Salta.

Paspalum prostratum Scribn. & Merrill. *U.S. Dept. Agric. Bull. Agrost.* xxiv. 9. (1901).

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: HT: *C.G. Pringle 3343*, 9 Nov 1890, Mexico: Michoacán: low lands near Pátzcuaro (US-2855765; IT: BAA (fragm. ex P), MO, NY-414201, NY-414202, P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. prosterno*, throw to the ground. Culms creeping or wiry so as to fall on the ground.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms prostrate, 30–75 cm long, spongy, rooting from lower nodes. Leaf-sheaths pilose. Ligule an eciliate membrane. Leaf-blade base broadly rounded. Leaf-blades 8–12 cm long, 10–20 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 3–15, borne along a central axis, unilateral, 1–3.7 cm long. Central inflorescence axis 5–15 cm long. Rhachis deciduous from axis, broadly winged, foliaceous, folded longitudinally to embrace spikelets, 2.5–3 mm wide, terminating in a barren extension, extension flattened, extension 3–5 mm long. Spikelet packing abaxial, regular, 2-rowed. 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, plano-convex, 2.1–2.2 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, hyaline, without keels.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, hyaline. Fertile lemma elliptic, 2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 60$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America.** Venezuela. Bolivia, Colombia, Ecuador, Peru.

TDWG4. Distrito Federal, Mexico State, Puebla. Durango, Guanajuato, Hidalgo. Veracruz. Guerrero, Jalisco, Michoacan, Oaxaca. Chiapas.

Paspalum proximum Mez. *Fedde, Repert.* xv. 66 (1917).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *B. Balansa* 69, no date, Paraguay: Guairá, ad Villa Rica, in pratis humidis (G-BOIS; ILT: BAA, K, L, P, US-2942555 (fragm.)). LT designated by Chase, Index to Grass Species (1962). ST: *Hassler 11382*, Paraguay: in altiplanitie Sierra de Amambay.

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (945, Fig 190).

Derivation (Clifford & Bostock 2007): L. near to. Readily confused with another species.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 45 cm long. Culm-nodes glabrous. Lateral branches ample. Leaves heterophyllous being wider on the culm. Leaf-sheaths keeled, pilose. Ligule an eciliate membrane. Leaf-blades filiform, 20 cm long, 1–2 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–3), paired, unilateral, 5–8 cm long. Central inflorescence axis 0 cm long. Rhachis angular, 0.8 mm wide, scabrous on margins. Spikelet packing abaxial. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 3.5–4 mm long, 1.5–2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 3.5 mm long, indurate, yellow, shiny, without keel. Lemma surface rugulose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil South. Paraguay.

TDWG4. Sao Paulo Parana, Catarina, Rio Grande do Sul. Corrientes.

Paspalum pubiflorum Fourn. *Mex. Pl.* 2:11 (1886).

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 Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H.G. Galeotti* 5747, no date, Mexico: Puebla: Tehuacán de las Granadas, secus rivulos inter Cactos, 5500 ft (BR; IT: US-2855739 (fragm. ex P)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (600), F.W.Gould, *The Grasses of Texas* (1975) (522, Fig. 275 as var. *pubiflorum*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (202, Fig. 132).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (97: 27, Fig.8 (2010)).

Derivation (Clifford & Bostock 2007): L. pubes, signs of puberty; flos, flower. With some or all parts of the inflorescence or spikelets densely hairy.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 40–80 cm long, without nodal roots or rooting from lower nodes. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades lanceolate, flat, 10–15 cm long, 6–15 mm wide. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5(–7), borne along a central axis, unilateral, 3–10 cm long. Central inflorescence axis 1–5 cm long. Rhachis narrowly winged, angular, 1–2 mm wide. Spikelet packing 4 -rowed. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, subacute, 2.7–3.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined or 5 -veined, obtuse. Fertile lemma elliptic, gibbous, 2.7–3.2 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 60$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico. Illinois, Kansas, Missouri, Oklahoma. Indiana, Ohio, West Virginia. California. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico. **Mesoamerica, Caribbean.** Cuba.

TDWG4. Mexico State, Morelos, Puebla. Aguascalientes, Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Baja California, Baja California Sur, Sonora. Guerrero, Jalisco, Michoacan, Oaxaca. Campeche.

Paspalum pubifolium J. & C. Presl. *Rel. Haenk.* i. 219. (1830).

TYPE from Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Haenke s.n.*, no date, Peru: Huánuco (PR; IT: US-2942513 (fragm. & photo ex PR)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. pubes, signs of puberty; folium, leaf. Leaf-blades hairy.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 40–70 cm long. Culm-nodes glabrous. Leaf-sheaths hispid. Ligule an eciliate membrane. Leaf-blades 10–20 cm long, 5–10 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pubescent, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, borne along a central axis, unilateral, 2–4 cm long. Rhachis angular, glabrous on margins. Spikelet packing 2 -rowed. Spikelets in pairs. 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, plano-convex, 2.6–2.9 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, smooth. Fertile lemma elliptic, 2.6–2.9 mm long, coriaceous, dark brown, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Paspalum pulchellum H. B. & K. *Nov. Gen. et Sp.* i. 90. (1815).

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: HT: *Humboldt & Bonpland s.n.*, Venezuela. Cumana (B-W?; IT: P-BONPL, K, US-2855742 (fragm. ex B-W, P-BONPL)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (239, Fig. 194), S.A.Renvoize, *The Grasses of Bahia*, 1984 (216, Fig. 80), J.A.Steyermark et al, *Flora of the Venezuelan*

Guayana Vol. 8 (2004) (236, Fig. 189), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (443, Fig. 166).

Derivation (Clifford & Bostock 2007): L. pretty. Attractive in some respect, usually the inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–80 cm long. Ligule a fringe of hairs. Leaf-blades flat or convolute, 10–30 cm long, 1–3 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2(–3), single or paired or digitate, unilateral, 3–8 cm long. Central inflorescence axis 0–1 cm long. Rhachis narrowly winged, angular, 0.5–0.7 mm wide. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, bearing a few hairs, hairy at tip, with 0.5 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, plano-convex, obtuse, 1.3–1.7 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic or oblong, gibbous, 1.3–1.7 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG), Continent. North America, South America.

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Colombia. Brazil Northeast, Brazil North.

TDWG4. Para, Amapa, Amazonas, Acre, Rondonia, Bahia, Maranhao, Piaui. Oaxaca. Chiapas, Tabasco.

Paspalum pumilum Nees. *Agrost. Bras.* 52. (1829).

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: *K.F.P. von Martius s.n.*, Dec-Jan, Brazil: Bahia, Almeda & Ferradas (M (photo, K, SI); IT: BM, US-929649 (fragm. ex M; photo, SI)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (204, Fig. 136), S.A.Renouvoise, *The Grasses of Bahia*, 1984 (228, Fig. 84), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (954, Fig 191), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (445, Fig 167), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (376, Fig. 164).

Derivation (Clifford & Bostock 2007): L. dwarf, low growing. Habit typically depauperate.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Culms 10–40 cm long, 1–1.5 mm diam. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths pubescent. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades 5–10 cm long, 3–7 mm wide. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 2.5–4 cm long. Rhachis narrowly winged. Spikelet packing abaxial, 2 -rowed. 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 ovate, dorsally compressed, obtuse, 1.5–1.8 mm long, 1.1–1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure or one to two the lower present in some spikelets, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.1–0.2 mm long, hyaline, 1 -veined. Lower glume lateral veins absent. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, with unevenly spaced veins (near margins). Fertile lemma ovate, 1.4–1.6 mm long, indurate, yellow, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.7 mm long, purple. Caryopsis with adherent pericarp.

2n = 20 (3 refs TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Leeward Is, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Chile Central, Paraguay.

TDWG4. Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Buenos Aires, Corrientes.

Paspalum pygmaeum Hack. *Fedde, Repert.* xi. 18 (1912).

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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Buchtien* 859, 1907, Bolivia: in altiplanitie prope La Paz ad 4100 m (W; IT: US-1099133).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (462, Fig 100).

Derivation (Clifford & Bostock 2007): L. dwarf. Culms shorter than those of many other species in the genus.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, mat forming. Culms decumbent, 2–6 cm long. Leaf-sheaths hirsute. Ligule an eciliate membrane. Leaf-blades lanceolate, 1–2 cm long, 1–2 mm wide. Leaf-blade surface pubescent, densely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or borne along a central axis, unilateral, 0.5–1 cm long. Central inflorescence axis 0.5–1 cm long. Rhachis deciduous from axis, narrowly winged, glabrous on surface, terminating in a barren extension, extension flattened. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, plano-convex, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, 2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico. Northern South America, Western South America, Southern South America. Venezuela. Bolivia, Colombia, Peru. Argentina Northwest.

TDWG4. Catamarca, Jujuy, Salta, Tucuman. Distrito Federal, Morelos, Tlaxcala. Durango. Veracruz. Guerrero, Jalisco, Michoacan.

Paspalum quadrifarium Lam. *Illustr.* i. 176. (1791).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Commerson s.n.*, Argentina: Buenos Aires (P-LA; ILT: FI, P, US-2855979 (fragm. ex P-LA & photo)). LT designated by Parodi, *Revista Mus La Plata* 1: 244 (1937).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (330), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (589), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1004, Fig. 196 & 1027, Fig. 200), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (401, Fig. 168), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (535, Fig. 141), B.Rosengurt, *Gramineas Uruguayas I* (1970) (377, Fig. 165).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): L. in four parts. In two rows of pairs.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Culms 90–180 cm long, 4-noded. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, 1–2 mm long, obtuse. Leaf-blades 15–40 cm long, 5–8 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 15–25, borne along a central axis, ascending, unilateral, 6–8 cm long. Central inflorescence axis 12–25 cm long. Rhachis narrowly winged, with sharp-edged midrib, with scattered hairs or glabrous on surface, scabrous on margins. Spikelet packing irregular, 4-rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 1 mm long, bearing a few hairs or 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 ovate, dorsally compressed, plano-convex, obtuse, 2.1–2.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, chartaceous, red, without keels, 3-veined. Upper glume surface pubescent, with tubercle-based hairs. Upper glume hairs white. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, chartaceous, 3-veined, glabrous, obtuse. Fertile lemma elliptic, gibbous, 2.1–2.6 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3.

$2n = 20$ (1 ref TROPICOS), or 30 (1 ref TROPICOS), or 40 (1 ref TROPICOS).

Distribution (TDWG). Continent. Australasia (*), North America, South America.

Country /Province /State. Australia. Queensland (*), New South Wales (*), Victoria (*). **Southwestern USA, Southeastern USA.** California. Florida, Louisiana. **Brazil, Southern South America.** Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. South East. Coast. Minas Gerais, Rio de Janeiro, Espirito Santo, Catarina, Rio Grande do Sul. Santiago del Estero, San Luis. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Formosa, La Pampa, Misiones, Santa Fe.

Paspalum quarinii O. Morrone & F.O. Zuloaga. *Candollea*, 55(2): 311 (2000).

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. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Rosengurtt B-5746*, 14 Mar 1950, Paraguay. Paraguari: Barrerito, Caapucú (US; IT: BAA, K, MA, P, SI).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Camilo Luis Quarin (1943-) Argentinian agrostologist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, herbaceous, or if woody then not a bamboo, caespitose. Rhizomes short, scaly. Culms 100–200 cm long, 3–5 mm diam. Culm-internodes 15–30 cm long, distally glabrous. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths 15–35 cm long, keeled, glabrous on surface or pilose, outer margin glabrous. Ligule an eciliate membrane, 2.4–4 mm long, brown, truncate. Collar glabrous or pubescent. Leaf-blade base with a false petiole (basal leaves), petiole 0.5–1 cm long. Leaf-blades 30–60 cm long, 10–18 mm wide, stiff. Leaf-blade surface glabrous or pubescent, hairy adaxially. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Peduncle 50–70 cm long, glabrous. Racemes few or numerous, 25–35, borne along a central axis, unilateral, 5–12.5 cm long. Central inflorescence axis 14–28 cm long, glabrous. Rhachis narrowly winged, 0.4–0.6 mm wide, ciliate on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, 1.2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, subacute, 1.6–2.4 mm long, 0.8–1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.75 length of spikelet, membranous, without keels, 3-veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3-veined, pubescent, obtuse. Fertile lemma elliptic, gibbous, 1.6–2.2 mm long, 0.8–1 mm wide, indurate, yellow, without keel, 5-veined, more than 3-veined. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.3 mm long. Anthers 3, 1–1.6 mm long. Caryopsis with adherent pericarp.
Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil, Southern South America. Brazil South. Paraguay.
TDWG4. Chaco, Corrientes, Misiones.

Paspalum racemosum Lam. *Illustr.* i. 176. (1791).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *D. Boutelou s.n.*, Peru (P; IT: BAA (fragm. ex P), P, US-2855976 (fragm. ex P)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (200, Fig. 128).

Derivation (Clifford & Bostock 2007): *L. racemosus*, stalk of a cluster of grapes; -osa, abundance. The spikelets are borne in racemes or contracted panicles.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, 60–100 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate or elliptic, 8–12 cm long, 10–25 mm wide, flaccid.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, closely spaced, unilateral, 0.5–2 cm long. Central inflorescence axis 5–15 cm long. Rhachis broadly winged, 1–2 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, plano-convex, obtuse, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface rugose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, rugose, obtuse. Fertile lemma elliptic, gibbous, 1.3–1.5 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Europe (*), Africa, North America, South America.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Northern Africa.** Egypt. **Northwest USA, Southeastern USA.** Colorado. Mississippi. **Caribbean, Western South America, Southern South America.** Cuba, Dominican Republic. Colombia, Ecuador, Peru.

Paspalum ramboi I.L. Barreto. *Bonplandia* 5: 291 (1983).

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: *Barreto s.n.*, 18 Dec 1964, Brazil: Rio Grande do Sul: Vacaria, Estação Experimental (BLA-4766; IT: CTES).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Rambo who collected in Brazil.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–80 cm long. Ligule an eciliate membrane. Leaf-blades 10–15 cm long, 3–4 mm wide. Leaf-blade surface glabrous. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 6–10 cm long. Central inflorescence axis 1 cm long. Rhachis narrowly winged, 1 mm wide. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump.

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, plano-convex, 3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2.5 mm long, indurate, yellow, dull, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 60$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil South.

Paspalum reclinatum Chase. *Journ. Wash. Acad. Sci.* iii. 317 (1943).

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: *E. Pérez Arbeláz & J. Cuatrecasas 6211*, 16 Jul 1939, Colombia: Cauca: Cordillera de Occidental, Cerro de Munchique, Hoya del Río Tambite, 2000–2500 m (US-1795921; IT: US-1795920).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (405, Fig 146).

Derivation (Clifford & Bostock 2007): *L. reclino*, lean back. Culms weakly procumbent.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 30–45 cm long, 1–2 mm diam., rooting from lower nodes. Culm-internodes thin-walled, distally glabrous. Culm-nodes brown, glabrous. Lateral branches ample. Leaf-sheaths outer margin glabrous or hairy. Ligule an eciliate membrane, 0.7–2 mm long, brown, pubescent on abaxial surface. Leaf-blades 5–14 cm long, 4–9 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 6–11, borne along a central axis, ascending or drooping, unilateral, 1.5–2.5 cm long. Central inflorescence axis 3.5–7.5 cm long. Rhachis narrowly winged, 1–1.2 mm wide. Spikelet packing abaxial, 2 -rowed. Raceme-bases brief, pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, 2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma ovate, 2–2.5 mm long, indurate, pallid, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long, purple. Caryopsis with adherent pericarp, ellipsoid.

$2n = 60$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Western South America. Costa Rica. Colombia, Ecuador.

Paspalum rectum Nees. *Hook. Kew Journ.* ii. 104. (1850).

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. Gardner 4045*, Apr 1840, Brazil: Goiás, Villa de Arrayas (K; IT: B, BM, G, P, US-80023 (fragm. ex P), US-824468, US-1066833, US-950947, W).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. upright*. Panicle branches erect or spike-like.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 60–90 cm long. Ligule an eciliate membrane. Leaf-blades filiform, involute, 20–40 cm long, 1 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 14 cm long. Rhachis narrowly winged, angular, 1 mm wide. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, plano-convex, subacute, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2.3 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil South.

Goiás.

Paspalum redondense Swallen. *Phytologia*, xiv. 388 (1967).

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: *J.R. Swallen* 8837, 20 Mar 1946–23 Mar 1946, Brazil: Paraná: Guarapuava, Fazenda Capão Redondo, loose tufts with rhizomes, shallow soil on rock outcrops (US-1961595; IT: MO-04902985).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, indicating location. From Fazenda Capco Redondo, Parana, Brazil.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Butt sheaths pubescent. Culms erect, 55–60 cm long. Culm-internodes distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, outer margin glabrous or hairy. Ligule an eciliate membrane. Leaf-blades erect, 6–10 cm long, 1.5–2.5 mm wide. Leaf-blade surface hirsute, sparsely hairy, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, unilateral, 3–7 cm long. Central inflorescence axis 4–7 cm long. Rhachis broadly winged, 2 mm wide. Spikelet packing abaxial, 4 -rowed. Raceme-bases pilose or hirsute. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2–8 mm long, 1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3–5 -veined, glabrous, acute. Fertile lemma elliptic, 2.8 mm long, indurate, pallid, 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 South.

TDWG4.

Paspalum reduncum Nees ex Steud. *Syn. Pl. Gram.* 31. (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F. Sellow s.n.*, 1836, Brazil (B; IT: LE-TRIN-0521.01 (fragm. & illustr.), US-80024 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. bent backwards. Racemes of inflorescence recurved.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Butt sheaths pubescent. Culms erect, 60–90 cm long. Leaves without demarcation between sheath and blade. Leaf-sheaths pilose. Ligule an eciliate membrane, 3–5 mm long, acute. Leaf-blades linear or lanceolate, 7–14 cm long, 4–6 mm wide. Leaf-blade surface pilose, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 6–10, borne along a central axis, straight or arcuate, unilateral, 1–3.5 cm long. Rhachis broadly winged, foliaceous, folded longitudinally to embrace spikelets, 1.5–2.5 mm wide. Spikelet packing crowded, 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong or obovate, dorsally compressed, plano-convex, 1.3–1.7 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma oblong or obovate, 2–3 mm long, indurate, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface papillose. Lemma margins involute. Palea involute, indurate. Palea keels tuberculate. Palea surface smooth.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South.

TDWG4. Goias, Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum redundans Chase. *Proc. Calif. Acad. Sc. Ser. IV.* xxi. 300 (1935).

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 Galapagos. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *John Thomas Howell 9902*, 9 Jun 1932, Galapagos Islands: north side of Indefatigable Island (CAS-211116: IT: MO-1199288, US-1611605).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *redundo*, be abundant. Locally abundant.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect or geniculately ascending, 70–90 cm long. Culm-internodes elliptical in section. Lateral branches lacking. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane, 2 mm long. Leaf-blades 5–20 cm long, 3–7 mm wide, dark green. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, borne along a central axis, erect or ascending, flexuous, unilateral, 2.5–6 cm long. Rhachis wingless, angular, 1–1.3 mm wide, scabrous on margins. Raceme-bases pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, flattened, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, turgidly plano-convex, obtuse, 4–5 mm long, 2.5–2.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, membranous, 5 -veined, obtuse. Fertile lemma obovate, 4 mm long, 2.3–2.5 mm wide, indurate, grey or light brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Ecuador.

Paspalum regnellii Mez. *Fedde, Repert.* xv. 75 (1917).

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: LT: *Glaziou 9049*, 8 Mar 1877, Brazil: Rio de Janeiro: Petropolis, S. Antonio (B; ILT: BAA, MO, P, US-2855813 (fragm. ex B)). LT designated by F. Zuloaga & O. Morrone, *Cat. New. World Grass.* 3: 507 (2003).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (330).

Derivation (Clifford & Bostock 2007): in honor of Anders Frederick Regnell (1807–1884) Swedish physician and botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations extravaginal or intravaginal. Culms robust, 100–150 cm long, 3–5 -noded. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths longer than adjacent culm internode, keeled, puberulous, with tubercle-based hairs. Ligule a ciliolate membrane. Leaf-blades 20–40 cm long, 10–20 mm wide. Leaf-blade surface pilose, hairy adaxially, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 6–20, borne along a central axis, unilateral, 6–10 cm long. Rhachis wingless, angular. Spikelet packing 4 -rowed. Raceme-bases hirsute. Spikelets in pairs. 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, dorsally compressed, plano-convex, obtuse, 2–2.5 mm long, 1.5–1.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.9 length of spikelet, membranous, dark brown, without keels, 3 -veined. Upper glume lateral veins obscure. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, light brown or purple, 5 -veined, puberulous, obtuse. Fertile lemma elliptic, 2–2.5 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 40$ (2 refs TROPICOS).

Distribution (TDWG). Continent. Australasia, South America.

Country /Province /State. Australia. New South Wales. **Brazil, Southern South America.** Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Chaco, Entre Rios, Misiones.

Paspalum remotum Remy. *Ann Sc. Nat. Ser. III.* vi. 349. (1846).

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 Bolivia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *J.B. Pentland s.n.*, 1839, Bolivia: La Paz: Cotana (P; IT: US-2855998 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 25–100 cm long, rooting from lower nodes. Culm-internodes elliptical in section. Ligule an eciliate membrane. Leaf-blades lanceolate, 5–20 cm long, 5–10 mm wide. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, borne along a central axis, unilateral, 2.5–9 cm long. Central inflorescence axis 2–10 cm long. Rhachis angular. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 3.1–3.4 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, puberulous, acute. Fertile lemma elliptic, 3–3.2 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$N = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina Northwest.

TDWG4. Jujuy, Salta, Tucuman.

Paspalum repens Berg. *Act. Helvet.* vii. 129. t. 7. (1772).

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 Surinam. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *Berg., Acta Helv. Phys.-Math. t. 7 (1762)*, LT designated (as type) by Renvoize, *Gram. Bolivia* 111 (1998). T: (L).

Recent Synonyms: *Paspalum fluitans* (Elliott) Kunth, *Revis. Gramin.* 1: 24 (1829).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (573), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (199, Fig. 127), S.A.Renvoize, *Gramineas de Bolivia* (1998) (462, Fig. 100), S.A.Renvoize, *The Grasses of Bahia*, 1984 (222, Fig. 82), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (238, Fig. 194), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (918, Fig. 184 & 933, Fig. 188), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (374, Fig. 154), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (522, Fig. 136), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (347, Fig. 150), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (483, Fig. 84), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (67, Fig. 37).

Illustrations (Journals): *Ruizia* (13:352, Fig 44h-k (1993)).

Derivation (Clifford & Bostock 2007): L. repo, crawl. Rhizome well developed.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent or prostrate, 50–200 cm long, spongy, rooting from lower nodes. Culm-nodes brown. Leaf-sheaths inflated. Leaf-sheath auricles erect. Ligule an eciliate membrane, 2–3 mm long, erose. Leaf-blades lanceolate, parallel-sided, 10–20 cm long, 12–15 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, closely spaced, spreading or ascending, unilateral, 2.5–10 cm long. Central inflorescence axis 3–30 cm long. Rhachis deciduous from axis, broadly winged, foliaceous, with rounded midrib, 1–1.5 mm wide, terminating in a barren extension, extension flattened. Spikelet packing abaxial, regular, 2 -rowed. 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, dorsally compressed, compressed strongly, plano-convex, acute, 1.4–2.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, hyaline, without keels, 2 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, hyaline, 2 -veined, acute. Fertile lemma elliptic, 1–1.5 mm long, coriaceous, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, coriaceous.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. North-central USA, South-central USA, Southeastern USA, Mexico. Illinois, Wisconsin. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Gulf (Mexico), Southwest Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Jamaica, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Para, Amapa, Amazonas, Acre, Rondonia, Mato Grosso, Bahia, Maranhao, Piaui, Sao Paulo Parana, Catarina, Rio Grande do Sul. Buenos Aires, Chaco, Corrientes, Distrito Federal, Entre Rios, Formosa, Santa Fe. Veracruz. Chiapas, Tabasco.

Paspalum reptatum Hitchcock & Chase. *Contrib. U. S. Nat. Herb.* xviii. 318 (1917).

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 Cuba. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Bro. León & F.R. Cazanans 5850*, 28 Dec 1915, Cuba. Santa Clara: West of Mamancas (US-865563; IT: NY-71053).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (225, Fig. 175).

Derivation (Clifford & Bostock 2007): L. repto, creep. Culms procumbent and root at the nodes.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Butt sheaths pubescent. Culms decumbent, 30–100 cm long, rooting from lower nodes. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths loose,

glabrous on surface. Ligule an eciliate membrane, 0.2 mm long. Leaf-blades 3–10 cm long, 2–5 mm wide. Leaf-blade surface glabrous to pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, spreading or deflexed, unilateral, 1–4 cm long. Central inflorescence axis 0.5–2 cm long. Rhachis wingless, angular. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, obtuse, 1.6–1.7 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, yellow, without keels, 2–3 -veined. Upper glume primary vein absent or distinct. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, yellow, 2–3 -veined, without midvein or with evident midvein, pubescent, obtuse. Fertile lemma elliptic, 1.4–1.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba, Jamaica.

Paspalum restingense S.A. Renvoize. *Kew Bull.*, 39(1): 179 (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R. M. Harley, S.A. Renvoize, C.M. Erskine & C.A. Brighton 17616*, 1 Apr 1974, Brazil: Bahia: 65 km NE of Itabuna, Rio de Contas (CEPEC; IT: LE, MO, US-3260297).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (234, Fig. 87).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. Portuguese *restinga*, a sandy pit. 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. Rhizomes elongated. Culms erect, 35–100 cm long. Culm-nodes black. Leaves basal and cauline. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blade base simple or broadly rounded or cordate. Leaf-blades lanceolate, 5–40 cm long, 5–14 mm wide. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–17, borne along a central axis, unilateral, 4–8 cm long. Central inflorescence axis 3.5–15.5 cm long. Rhachis flattened. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pubescent, acute. Fertile lemma elliptic, 2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4. Bahia.

Paspalum reticulinerve S.A. Renvoize. *Kew Bull.*, 50(2): 339 (1995).

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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *J.C. Solomon 17003*, 8 June 1987, Bolivia: La Paz (MO!).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (450, Fig 97).

Illustrations (Journals): *Kew Bulletin* (50: 340, Fig.1 (1995)).

Derivation (Clifford & Bostock 2007): *L. reticulum*, net; *nervum*, nerve. Venation of lower glume reticulate.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 120 cm long. Ligule an eciliate membrane. Leaf-blades 10–30 cm long, 3–5 mm wide. Leaf-blade surface pubescent, densely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–3), paired, unilateral, 9 cm long. Rhachis 1 mm wide, ciliate on margins. Spikelet packing crowded, 2 -rowed. 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, dorsally compressed, compressed strongly, plano-convex, 4.5–5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, auriculate at base, 1 length of spikelet, herbaceous, without keels, winged on margins, 5 -veined. Upper glume lateral veins with cross-veins. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 3.5 mm long, 0.9 length of fertile lemma, 1 length of spikelet, coriaceous, winged on margins, 3 -veined, with cross-veins, sulcate, papillose, puberulous, hairy below, ciliate on margins, fringed above. Fertile lemma elliptic, 3 mm long, indurate, without keel. Lemma margins involute, ciliate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, Brazil. Bolivia. Brazil West Central, Brazil North.

Paspalum riedelii Mez. *Fedde, Repert.* xv. 66 (1917).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *L. Riedel* 1645, no date, Brazil: Minas Gerais, Taubate (B; IT: BAA, LE, P, US-950902 (fragm.), US-285991 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Ludwig Riedel (1790–1861) German plant collector and traveller.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms 100 cm long. Leaf-sheaths without keel, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, obtuse. Leaf-blades linear or elliptic, 15–30 cm long, 2–4 mm wide, stiff. Leaf-blade midrib indistinct. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, borne along a central axis, unilateral, 2–5.5 cm long. Central inflorescence axis 4–7 cm long. Rhachis angular, scabrous on margins. Spikelet packing 2 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acute, 3.5–4 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 3.5–4 mm long, indurate, dark brown, shiny, without keel. Lemma surface punctate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

TDWG4. Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum riparium Nees. *Agrost. Bras.* 56. (1829).

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: *K.F.P. von Martius s.n.*, Nov 1819, Brazil: Amazonas (M; IT: US-2855986 (fragm. ex M)).

Illustrations (Books): E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (467, Fig 82).

Derivation (Clifford & Bostock 2007): *L. ripa*, river bank; -aria, pertaining to. Growing on river banks.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms 25–45 cm long. Ligule an eciliate membrane, 1 mm long. Leaf-blades 10–20 cm long, 2.5–7 mm wide. Leaf-blade surface glabrous, hairless throughout or except near base.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, digitate, unilateral, 2–3 cm long. Rhachis 0.7–1 mm wide. Spikelet packing 2 -rowed. Spikelets in pairs. 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 orbicular, dorsally compressed, plano-convex, 1.6–1.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret orbicular, 1 length of spikelet, membranous, grey, 3 -veined, wrinkled, obtuse. Fertile lemma orbicular, 1.6–1.8 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. French Guiana, Guyana, Surinam, Venezuela. Colombia. Brazil West Central, Brazil Northeast, Brazil North.

Paspalum rocanum Leon. *Mem. Torr. Bot. Cl.* xvi. 57 (1920).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Bro. León & M. Roca* 8233, 10 Aug 1918, Cuba: Las Villas: Sabana de Motembo (NY-71054, US-1060722).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (217, Fig. 158).

Derivation (Clifford & Bostock 2007): *L. -anum*, indicating connection. In honor of Modesta Roca, Cuban cleric and friend of Brother Lion who collected in West Indies.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 40–75 cm long. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths as wide as blade at the collar, keeled, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 2–2.5 mm long. Leaf-blades conduplicate, 10–30 cm long, 3–7 mm wide. Leaf-blade surface glabrous. Leaf-blade margins glabrous or tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or borne along a central axis, arcuate, unilateral, 2.5–9 cm long. Central inflorescence axis 1–6 cm long. Rhachis wingless, angular, 1.2–1.5 mm wide, scaberulous on margins. Spikelet packing crowded. Spikelets in pairs. 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, dorsally compressed, plano-convex, acute, 2.1–2.5 mm long, 1.3–1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface papillose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, concave across back, papillose, acute. Fertile lemma elliptic, 2–2.2 mm long, indurate, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Paspalum rottboellioides Wright. *Anal. Acad. Ci. Habana*, viii. 204 (1871).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Wright 3864*, 1865, Cuba: en las sabanas arenosas de la Vuelta-abajo (GH; IT: NY-71042, US-950946).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (218, Fig. 160).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling *Rottboellia* with respect to the inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms slender, 20–75 cm long, 2-noded. Culm-internodes distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades involute, 5–18 cm long, 1–1.5 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 4–12 cm long. Central inflorescence axis 1–2 cm long. Rhachis narrowly winged, angular, 1.5 mm wide. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, plano-convex, subacute, 3–3.3 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface villous, hairy below. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, with unevenly spaced veins (near margins), concave across back, villous, hairy at base, acute. Fertile lemma elliptic, 2.3–2.5 mm long, 0.9 mm wide, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Paspalum rufum Nees ex Steud. *Syn. Pl. Gram.* 26. (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Sellow 3218*, 1836, Brazil (B; IT: BAA, K, LE-TRIN-0523.01 (fragm. & Illustr.), SI, US-2855989 (fragm. ex B)). HT: *F. Sellow 3218*, no date, Brazil (B; IT: BAA-2285 (fragm. ex B), US-2855989).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (392, Fig. 163), B.Rosengurt, *Gramineas Uruguayas I* (1970) (376, Fig. 166).

Derivation (Clifford & Bostock 2007): L. reddish. Inflorescence purple to red.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, robust, 100–180 cm long, 4–5 -noded. Culm-nodes constricted, black, glabrous. Lateral branches lacking. Ligule an eciliate membrane, 2–3 mm long, brown, truncate. Leaf-blades flat or conduplicate, 30–75 cm long, 6–8 mm wide. Leaf-blade surface scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 9–20, borne along a central axis, unilateral, 2–11 cm long. Central inflorescence axis 12–20 cm long. Rhachis angular, 0.5–0.9 mm wide. Spikelet packing 4-rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, unequal, 0.5–1.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, dorsally compressed, plano-convex, 3.6–4.8 mm long, 1.5–1.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, light brown, without keels, 5 -veined. Upper glume surface pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, light brown, 5 -veined, smooth, acute. Fertile lemma ovate, 3–3.6 mm long, 1.4–1.8 mm wide, indurate, dark brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 2–2.8 mm long. Caryopsis with adherent pericarp, ellipsoid, 2.2 mm long, dark brown. Hilum elliptic.

$2n = 20$ (1 ref TROPICOS), or 40 (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Catarina, Rio Grande do Sul. Salta. Chaco, Corrientes, Entre Rios, Formosa, Misiones, Santa Fe.

Paspalum rugulosum O. Morrone & F.O. Zuloaga. *Ann. Missouri Bot. Gard.*, 82(1): 108 (1995).

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 Ecuador. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *P.M. Peterson, E.J. Judziewicz, R.M. King & P.M. Jørgensen 9249*, 22 May 1990, Ecuador: Chimborazo: Paso Redondo, 17.5 km SW of San Juan de Velasco on road to Pallatanga, 2430 m (US-3237226; IT: K, MO-3853357).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. ruga*, wrinkle; -ula, diminutive; -osa, abundance.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 25–35 cm long. Culm-internodes terete or semiterete, 3–13 cm long, distally glabrous. Culm-nodes brown, glabrous. Lateral branches ample. Leaf-sheaths 2.5–7 cm long, mostly shorter than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 1.2–1.7 mm long, pubescent on abaxial surface. Collar glabrous. Leaf-blade base with a brief petiole-like connection to sheath, petiole pubescent. Leaf-blades lanceolate, 2–6.5 cm long, 4–10 mm wide. Leaf-blade midrib evident. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Peduncle 10–19 cm long, glabrous. Racemes 6–10, borne along a central axis, ascending, unilateral, 1–3.5 cm long. Central inflorescence axis 4–7 cm long, glabrous. Rhachis narrowly winged, 0.5–0.8 mm wide, scabrous on surface, scabrous on margins, terminating in a sterile spikelet. Spikelet packing abaxial, 2 -rowed. Raceme-bases brief, pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.7 mm long, scaberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, subacute, 2.7–3 mm long, 0.9–1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface wrinkled (on margins).

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2.3–2.4 mm long, 0.7 mm wide, indurate, yellow, shiny, without keel. Lemma surface smooth, glabrous. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.3 mm long, truncate. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.8 mm long, pallid. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Ecuador.

Paspalum rupestre Trin. *Linnaea*, x. 293. (1836).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Poeppig s.n.*, 1823, Cuba: in rupibus aridis (LE-TRIN-0524.01; IT: US-2855990 (fragm. ex LE), US-2855990 (fragm. ex W)). T: *E.F. Poeppig 18*, 1823, Cuba (US-2855990).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (221, Fig. 166).

Derivation (Clifford & Bostock 2007): *L. rupes*, rock; -estre, place of growth; Growing amongst rocks.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, cushion forming or caespitose. Culms geniculately ascending or decumbent, slender, 10–44 cm long, 1 -noded. Culm-nodes pubescent. Leaves mostly basal. Leaf-sheaths as wide as blade at the collar, keeled, glabrous on surface or puberulous, outer margin hairy. Leaf-sheath oral hairs

scanty. Ligule an eciliate membrane. Leaf-blades tortuous, flat or conduplicate, 3–12 cm long, 1.5–4 mm wide. Leaf-blade surface puberulous, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight or arcuate, unilateral, 1.2–4.5 cm long. Rhachis wingless, angular, puberulous on surface. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, obtuse, 1–1.5 mm long, 0.8–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 2–3 -veined. Upper glume primary vein absent or distinct. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 2–3 -veined, without midvein or with evident midvein, obtuse. Fertile lemma elliptic, 1–1.5 mm long, indurate, light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba, Dominican Republic, Haiti, Puerto Rico.

Paspalum rupium S.A. Renvoize. *Kew Bull.*, 39(1): 179 (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Harley et al. 15406*, Brazil. Bahia: Pico das Almas (CEPEC-9833; IT: K, SI).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (208, Fig. 77).

Derivation (Clifford & Bostock 2007): *L. rupes*, rock; -ium, characteristic of. Growing amongst rocks.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–60 cm long. Culm-nodes pubescent. Ligule an eciliate membrane. Leaf-blades involute, 13–22 cm long, 1–2 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 5–6, borne along a central axis, unilateral, 2–6 cm long. Central inflorescence axis 6–9.5 cm long. Rhachis scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2–0.4 length of spikelet, 0 -veined. Lower glume lateral veins absent. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 3 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4. Bahia.

Paspalum saccharoides Nees ex Trin. *Spec. Gram.* Ic. i. t. 107. (1828).

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:** *Saccharum polystachyum* Sw., *Prodr.* 21 (1788)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Anon. s.n.*, West Indies: St. Christopher (S).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (241, Fig. 196), S.A.Renvoize, *Gramineas de Bolivia* (1998) (487, Fig. 107), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (238, Fig. 193), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (447, Fig. 168).

Illustrations (Journals): *Ruizia* (13:356, Fig 45g-j (1993)).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling *Saccharum* in spikelet or inflorescence form.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending or decumbent, robust, 100–200 cm long. Ligule a fringe of hairs. Leaf-blades 15–30 cm long, 8–13 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, digitate, flexuous, unilateral, 15–30 cm long. Central inflorescence axis 3–5 cm long. Rhachis broadly winged, with rounded midrib, 0.5–0.75 mm wide, scabrous on margins. Spikelet packing abaxial, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, acuminate, 2.5–3 mm long, with hairs extending 3–5 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, exceeding apex of florets, thinner than fertile lemma. Upper glume lanceolate, 1 length of spikelet, hyaline, without keels, 2 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 0.75 length of spikelet, hyaline, 2 -veined, glabrous, acute. Fertile lemma ovate, 1.5–2 mm long, cartilaginous, without keel. Lemma margins involute. Lemma apex acute. Palea involute, cartilaginous.

Flower and Fruit. $2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America. Costa Rica, Panama. Leeward Is, Windward Islands, Trinidad-Tobago. Venezuela. Bolivia, Colombia, Ecuador, Peru.

Paspalum sauetii Chase ex Ekman. *Contrib. U. S. Nat. Herb.* xxviii. 147 (1929).

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 Cuba. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Bro. León* 8982, 9 Oct 1919, Cuba: La Habana (US-1060707; IT: NY-71043).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (222, Fig. 167).

Derivation (Clifford & Bostock 2007): in honor of Leon Joseph Sylvestre Sauget-Barbier (1871–1955) French-born cleric and Cuban botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending or decumbent, slender, tortuous, 15–40 cm long, wiry. Culm-nodes pubescent. Lateral branches lacking or sparse. Leaves mostly basal. Leaf-sheaths glabrous on surface or pilose, outer margin hairy. Ligule an eciliate membrane. Leaf-blades tortuous, flat or conduplicate, 3–15 cm long, 3–7 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 1(–2), single or paired, straight or arcuate, unilateral, 2–4 cm long. Rhachis wingless, angular, 1 mm wide, glabrous on surface or puberulous on surface. Spikelets solitary or in pairs. 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, dorsally compressed, plano-convex, obtuse, 1.3–1.6 mm long, 1–1.1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous or pubescent, obtuse. Fertile lemma elliptic, 1.3–1.6 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Southeastern USA. Florida. Caribbean. Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico.

Paspalum sauræ (L. Parodi) L. Parodi. *Darwiniana*, xv. 106 (1969).

TYPE from Uruguay. **Basionym or Replaced Name:** *Paspalum notatum* var. *sauræ* Parodi, *Revista Argent. Agron.* 15: 55, f. 1B (1948). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: L.R. Parodi 12670, Jan 1937, Argentina: Entre Ríos, Concepcion del Uruguay (BAA; IT: US-1721333).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (383, Fig. 159).

Derivation (Clifford & Bostock 2007): in honor of Fulgencio Saura (fl. 1948) Argentinian cytologist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Basal innovations intravaginal. Culms 25–50 cm long, 2–4 -noded. Ligule an eciliate membrane. Leaf-blades flat or involute, 5–20 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes (2–)4–5, digitate, unilateral, 5–10 cm long. Rhachis angular. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, obtuse, 2.8–3.2 mm long, 1.8–2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma elliptic, 2.8–3.2 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Argentina Northeast.

TDWG4. Buenos Aires, Entre Rios.

Paspalum scandens Tutin. *J. Bot.* 72: 338 (1934).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya scandens* (Tutin) Soderstr. ex A.G. Burman, *Brittonia*, 32(2): 220 (1980).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *scando*, climb up. Of scrambling habit.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, 60–90 cm long. Ligule an eciliate membrane. Leaf-blades 8–18 cm long, 4–6 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 1(–2), single or paired, unilateral, 4–11 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 1 mm wide, scabrous on margins. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, obtuse, 1.6–1.8 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3 mm long, 0.15–0.2 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 0.66 length of spikelet, membranous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, hyaline, 5 -veined, obtuse. Fertile lemma ovate, 1.5 mm long, coriaceous, pallid, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex obtuse. Palea coriaceous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America. French Guiana, Guyana, Surinam.

Paspalum scalare Trin. *Sp. Gram.* Ic. iii. t. 274. (1831).

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: *Langsdorff s.n.*, Maio 1824, Brazil. Serra da Chapada (LE-TRIN-0527.02 (& illustr.); IT: US-952286 (fragm. ex LE)). HT: s.d., [Brazil]: in fissuris rupium Serra du Chapada (LE-TRIN-0527.01). T: *G.H. von Langsdorff s.n.*, no date, Brazil (US-952286). IT: *Riedel s.n.*, Brazil (MO-5117074).

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (214, Fig. 79).

Derivation (Clifford & Bostock 2007): L. scala, ladder; -aris, pertaining to. Lemma ornamented with longitudinal striations.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms slender, 25–60 cm long, wiry. Lateral branches ample. Ligule an eciliate membrane. Leaf-blades spreading, flat or involute, 1.5–8 cm long, 1–2 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 1–5.5 cm long. Central inflorescence axis 1–2 cm long. Rhachis flattened. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 1–1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins obscure. Upper glume surface glabrous or pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 2 -veined, without midvein, glabrous or pilose, acute. Fertile lemma elliptic, 1–1.5 mm long, indurate, pallid, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil Southeast.

TDWG4. Mato Grosso, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum schultesii Swallen. *Phytologia*, xiv. 387 (1967).

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: *R.E. Schultes, I. Cabrera 19934*, Jun 1953, Colombia: Vaupes: Río Paraná (tributary of Río Vaupés). Alt. 700 ft; 1°10'N, 70°30'W (US-2150293; IT: MO-5114651). OS.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Richard Evans Schultes (1915-) who collected in Colombia.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 16–35 cm long. Culm-internodes distally glabrous. Leaf-sheaths pilose. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades involute, 10–25 cm long. Leaf-blade surface scabrous, pubescent, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, appressed or ascending, unilateral, 1.5–3 cm long. Rhachis wingless, angular. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1 mm long, ciliate.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels. Upper glume primary vein absent. Upper glume lateral veins obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, without midvein, obscurely veined. Fertile lemma obovate, indurate, dark brown, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Colombia.

Paspalum schumannii (Pilger) S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 518 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Panicum schumannii* Pilg., *Bot. Jahrb. Syst.* 30(1): 134 (1901).

Recent Synonyms: *Thrasya schumannii* (Pilger) Pilger, *Engl. & Prantl, Nat. Pflanzenfam. Aufl.* 2, xiv e. 69 (1940).

Illustrations (Books): R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (68, Fig. 39 as *Thrasya*).

Derivation (Clifford & Bostock 2007): In honor of Karl Schumann (1851–1904) German botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 70–80 cm long. Culm-nodes bearded. Leaf-sheaths keeled, pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 2 mm long. Leaf-blades 5–14 cm long, 3–4 mm wide. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, arcuate, unilateral, 6–10 cm long. Rhachis broadly winged, 6 mm wide, glabrous on surface, tuberculate on margins, ciliate on margins, terminating in a barren extension, extension flattened. Rhachis hairs yellow. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, 3 mm long, 0.9 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.2 mm long, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 0.25–0.33 length of spikelet, membranous, without keels, 0 -veined. Upper glume primary vein absent. Upper glume lateral veins absent. Upper glume apex emarginate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic or oblong, 1 length of spikelet, coriaceous, sulcate or readily splitting into two halves, smooth or scaberulous, rough above, acute. Palea of lower sterile floret membranous. Fertile lemma elliptic, 2.7 mm long, coriaceous, without keel. Lemma surface papillose or striate. Lemma margins involute. Lemma apex acute, pubescent. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central.

Paspalum scrobiculatum L. *Mant.* i. 29. (1767).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (& as *P. cartilagineum*, *P. commersonii*), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from India. **Basionym or Replaced Name:** *Paspalum auriculatum*. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: Cultivated at Uppsala from material collected in India (LINN-79.4; ILT: K). LT designated by ?.

Recent Synonyms: *Paspalum orbiculare* L., *Mant.* i. 29. (1767). *Paspalum commutatum* Nees, *Agrost. Bras.* 59. (1829).

P. commutatum Nees.

Paspalum polystachyum.

P. cartilagineum.

Paspalum boscianum Flügge.

Illustrations (Books): W. Robyns (1929 and 1934). *Flora Agrostologique du Congo Belge et du Ruanda-Urundi*, I. Maydees et Andropogonees and II. Panicees. Bruxelles, Goemaere (131, Pl. 31, as var. *polystachyum*), R.M.Phillips, F.T.E.A., *Gramineae* (3(1982):611, Fig. 142), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (388, Fig 330 as *P. commersonii*), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (31 & 401, Fig. 7 & 152 as *P. commersonii* & *P. polystachyum*), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (233, Fig. 94), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (576 & 590 as *P. commersonii*), C-C Hsu, *Taiwan Grasses* (1975) (& as *P. commersonii*), N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (327, Fig. 337 as *P. commersonii*), K.M.Matthew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (Pl. 812 & Pl. 813), H.J.Noltie, *The Grasses of Bhutan* (2000) (713, Fig. 42), H.B.Gilliland, *Grasses of Malaya* (1971) (186, Fig. 38),

H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (109, Fig. 110 as var. *bispicatum*), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (244, Pl. 72 as *P. commersonii*), J.R.Wheeler et al, *Flora of the Kimberley Region* (1992) (1201, Fig. 340), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (330), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (223, Fig. 36), 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) (573), R.Pilger, *Die Natürlichen Pflanzenfamilien 14e* (1940) (63, Fig. 34 as *P. auriculatum*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 737 as *Paspalum scrobiculatum* var. *scrobiculatum*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 739 as *Paspalum scrobiculatum* var. *orbiculare*), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:105(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass. Grasses of Australia*. CD-Rom Version 1.0. (2002);, H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005); (as var. *bispicatum*), F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. scrobis, ditch; -ulus, diminutive; -atus, possessing. Glumes or lemmas furrowed.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, mat forming or caespitose. Culms erect or geniculate ascending, 10–150 cm long, 1–6 mm diam., 2–17 -noded, without nodal roots or rooting from lower nodes. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule an eciliate membrane. Leaf-blade base simple. Leaf-blades 5–40 cm long, 3–15 mm wide. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 1–20, digitate or borne along a central axis, unilateral, 2–15 cm long. Central inflorescence axis 0–8 cm long. Rhachis broadly winged, with sharp-edged midrib, 1–2.5 mm wide. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate or orbicular, dorsally compressed, plano-convex, obtuse, 1.4–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, chartaceous, dark brown, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, chartaceous, 3–5 -veined, obtuse. Fertile lemma elliptic or orbicular, gibbous, indurate, dark brown, dull, without keel, 5 -veined, more than 3-veined. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $N = 20$ (4 refs TROPICOS), or 21 (1 ref TROPICOS), or 30 (1 ref TROPICOS). $2n = 40$ (1 ref TROPICOS).

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, Middle Atlantic ocean, Western Indian ocean.** Cape Verde. Liberia, Senegal, Sierre Leone. Cabinda, Cameroon, Gabon, Annobon, Principe & Sao Tome, Rwanda, DRC. Chad, Eritrea, Ethiopia (inc. Eritrea), Socotra, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West (?), Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Northern Cape, Western Cape, Eastern Cape. Ascension, St Helena. Mauritius, Madagascar, Reunion, Rodrigues, Seychelles. **Arabian Peninsula, China, Eastern Asia.** China South Central, Hainan, China Southeast. Japan, Kazan-retto, Nansei-Shoto, Ogosawarashoto, Taiwan. Japan Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Bangladesh, Eastern Himalaya, India, Pakistan, Sri Lanka. Andaman Is, Cambodia, Laos, Myanmar, Thailand, Vietnam. Borneo, Java, Lesser Sunda Is, Malaya, Singapore, Moluccas, Philippines, Sulawesi, Sumatra. New Guinea, Solomon Is. **Australia, New Zealand.** Western Australia, Northern Territory, Queensland, New South Wales, Lord Howe-Norfolk Is. **Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific.** Fiji, Nauru, Niue, New Caledonia, Samoa, Tonga, Vanuatu, Wallis-Futuna Is. Cook Is, Easter Is, Pitcairn Is, Society Is, Tuamotu Is, Tubuai Is. Marianas, Wake Is. Hawaii (*). **Mexico.** Southwest Mexico. **Mesoamerica, Northern South America, Western South America, Brazil.** Costa Rica, El Salvador, Honduras, Panama. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil West Central, Brazil North, Brazil Southeast, Brazil South.

TDWG4. Fujian, Guangdong, Guangxi, Jiangsu, Jiangxi, Zhejiang. Guizhou, Hubei, Sichuan, Yunnan. Darjeeling, Bhutan, Sikkim. Kimberley. Darwin & Gulf, Victoria R & Barkly Tableland. North, Central, South East, Inland. Coast. Sao Paulo Parana. Jalisco.

Paspalum scutatum Nees ex Trin. *Gram. Panic.* 105. (1826).

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>; *vide* TROPICOS and Kew Synonymy Database: HT: *Martius s.n.*, Apr, Brazil. Piaui (LE-TRIN-0530a.01; IT: K, M, US-80015 (fragm. ex M), W).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (207, Fig. 76).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms 30–50 cm long. Ligule an eciliate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 3–8 cm long, 5–7 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, borne along a central axis, unilateral, 1–4 cm long. Central inflorescence axis 1–5 cm long. Rhachis angular. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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 rhomboid, dorsally compressed, plano-convex, cuspidate, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblate, gibbous, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex cuspidate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret trullate, 1 length of spikelet, membranous, thicker on margins, 2 -veined, without midvein, cuspidate. Fertile lemma orbicular, gibbous, 2–3 mm long, indurate, pallid, keeled, lightly keeled. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4. Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe.

Paspalum seminudum (A.G.Burman)S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 518 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya seminuda* A.G.Burman, *Brittonia*, 32(2): 218 (1980).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *semi*, half; *nuda*, bare. Only part of the plant bearing hairs.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent. Culms erect or geniculately ascending, 100 cm long. Culm-internodes distally pubescent. Culm-nodes bearded. Leaf-sheaths keeled, hirsute. Leaf-sheath oral hairs bearded. Ligule an eciliate membrane, 5–6 mm long, acute. Leaf-blades 12–30 cm long, 4–7 mm wide. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade margins glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, arcuate, unilateral, 14–30 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 3–4 mm wide, glabrous on surface, pubescent on margins, terminating in a barren extension, extension flattened. Rhachis hairs white, 3–4 mm long. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3.5–4 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.1–0.2 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1 length of adjacent fertile lemma, 0.9 length of spikelet, chartaceous, without keels, 5 -veined. Upper glume surface pilose, hairy at base. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic or oblong, 0.9 length of spikelet, coriaceous, sulcate or readily splitting into two halves, with basal tufts of hair, 1 hair tufts in all, eciliate on midvein or pubescent on midvein, ciliate on margins (above), acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 2.8 mm long, coriaceous, without keel. Lemma

surface papillose or striate. Lemma margins involute, ciliate, hairy above. Lemma apex acute, pubescent. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil North.

Paspalum serpentinum Hochst. ex Steud. *Syn. Pl. Gram.* 22 (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 Surinam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Kappler 1561, Feb–Apr 1844, Surinam: in districtu Surinamensi Para, in campis (P; IT: CN, G, MO-2102097, P, US-80018 (fragm.), W).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (205, Fig. 137), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (449, Fig 169).

Derivation (Clifford & Bostock 2007): L. serpens, snake; -ina, indicating resemblance. Lemmas transversed with dark lines.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–100 cm long, 1.5 mm diam. Culm-internodes solid, distally glabrous. Culm-nodes constricted, glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 0.3–0.6 mm long. Leaf-blades flat or involute, 15–30 cm long, 3–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Peduncle pilose above. Racemes 2, paired, unilateral, 3–7 cm long. Rhachis wingless, 0.5–0.7 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets orbicular, dorsally compressed, obtuse, 2.5–2.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, light brown or dark brown (mottled), without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 3 -veined, with unevenly spaced veins (near margins), obtuse. Fertile lemma elliptic, 2.5–2.8 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 1.9 mm long.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Brazil.** Belize, Costa Rica, Honduras, Nicaragua, Panama. Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Brazil Northeast, Brazil North.

Para, Amapa, Maranhao, Piaui. Mexico State. Coahuila, Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Tabasco.

Paspalum setaceum Michx. *Fl. Bor. Am.* i. 43. (1803).

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 *P. ciliatifolium*), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Michaux s.n.*, USA: Hab. in Carolina, Georgia (P).

Recent Synonyms: *Paspalum ciliatifolium* Michx., *Fl. Bor. Am.* 1: 44 (1803). *Paspalum longepedunculatum* Le Conte, *Journ. Phys.* 91: 284 (1820).

Paspalum rigidifolium Nash, *Bull. N. York Bot. Gard.* 1: 292. (1899).

Paspalum separatum Shinnars, *Rhodora* 56: 32 (1954).

Paspalum psammophilum Nash ex Hitchcock, *Rhodora* 8: 205 (1906).

Paspalum supinum Bosc, ex Poir., *Encyc.* 5: 29 (1804).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (as *P.ciliatifolium*), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*,

part 2 (2003) (591 & 593 as varieties *setaceum* & *ciliatifolium* & *longepedunculatum* & *muhlenbergii* & *psammophilum* & *rigidifolium* & *stramineum* & *supinum* & *villosissimum*), F.W.Gould, *The Grasses of Texas* (1975) (525, Fig. 276 as var. *stramineum*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (206, Fig. 140 & 207, Fig. 141 as *P.ciliatifolium* & *P.propinquum*), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:94(1980) as *P. ciliatifolium*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002); (as *P. ciliatifolium*).

Derivation (Clifford & Bostock 2007): L. seta, bristle; -acea, indicating resemblance. With bristle-like leaf-blades.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, short-lived, caespitose. Rhizomes short. Culms 30–80 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane. Leaf-blades 6–25 cm long, 2–20 mm wide. Leaf-blade surface glabrous to hirsute.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1–2(–4), single or paired or borne along a central axis, unilateral, 3–17 cm long. Central inflorescence axis 2–8 cm long. Rhachis wingless, angular. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, 1.4–2.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, without midvein or with evident midvein, glabrous or puberulous, obtuse. Fertile lemma elliptic, gibbous, 1.4–2.6 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Australasia (*), Pacific, North America, South America.

Country /Province /State. Australia. New South Wales (*). **Northwestern Pacific.** Samoa (*). Cook Is (*). Marianas (*), Marshall Is (*), Wake Is (*). Hawaii (*). **Eastern Canada, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Illinois, Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin. Connecticut, Indiana, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Arizona. New Mexico, Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico. **Mesoamerica, Caribbean.** Costa Rica, El Salvador, Honduras, Nicaragua, Panama. Bahamas, Bermuda, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico.

TDWG4. Coast. Mexico State. Chihuahua, Durango, Neuvo Leon, Tamaulipas. Veracruz. Sonora. Jalisco.

Paspalum setosum Swallen. *Ann. Missouri Bot. Gard.* 92(4): 518 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Paspalum*).

Basionym or Replaced Name: *Thrasya setosa* Swallen, *Fieldiana, Bot.*, xxviii. No. 1, 17 (1951). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.A. Steyermark 58502*, 8 Sep 1944, Venezuela: Amazonas: collected in vicinity of Sanariapo, near Río Sanariapo, tributary of Orinoco river (US-1911654; IT: F).

Recent Synonyms: *Paspalum setosum* (Swallen) S.Denham, *Ann. Missouri Bot. Gard.*92(4): 518 (2005).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending or decumbent, 40–70 cm long. Culm-nodes bearded. Leaf-sheaths keeled, pilose, with simple hairs or tubercle-based hairs. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1.5 mm long, erose. Leaf-blades 10–30 cm long, 2–3 mm wide. Leaf-blade surface pubescent or pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 1, single, arcuate, unilateral, 3–12 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 2 mm wide, glabrous on surface, tuberculate on margins, ciliate on margins, terminating in a barren extension, extension

flattened. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 1.1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret lanceolate, 0.9 length of spikelet, coriaceous, sulcate or readily splitting into two halves, with basal tufts of hair, 1 hair tufts in all, ciliate on margins (above), bearing yellow hairs, acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 2.4 mm long, coriaceous, without keel. Lemma surface papillose or striate, with conspicuous apical hairs. Lemma margins involute. Lemma hairs 0.7 mm long. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America. Venezuela.

Paspalum simile Mez. *Repert. Spec. Nov. Regni Veg.* 15: 70 (1917).

Regarded by K as a synonym (*P. molle*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A.F.M. Glaziou 14393*, no date, Brazil (B; IT: P, US-80021 (fragm. ex B), US-1645668 (fragm. ex P)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. like. Readily confused with one or more other species.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 20–40 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or pilose, outer margin hairy. Ligule an eciliate membrane. Leaf-blades 7–14 cm long, 3–7 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous. Leaf-blade margins entire or crenate, ciliate, hairy at base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 5, borne along a central axis, unilateral, 2–4.5 cm long. Rhachis angular, smooth on margins. Raceme-bases brief, pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, obtuse, 1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, puberulous, obtuse. Fertile lemma elliptic, 1.5 mm long, indurate, yellow, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum simplex Morong. *Ann. N. Y. Acad. Sci.* vii. 259. (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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Morong 1583*, Feb 1888-Feb 1890, Paraguay: Pilcomayo River (NY; IT: BM, G, K, US-824355, US-952254, MO-2977305).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (409, Fig. 172), B.Rosengurt, *Gramineas Uruguayas I* (1970).

Derivation (Clifford & Bostock 2007): L. simple. Culms or inflorescences unbranched.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–120 cm long. Culm-nodes bearded. Ligule an eciliate membrane, 4–6 mm long. Leaf-blades 2–5 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 5–15, borne along a central axis, unilateral, 2–7.5 cm long. Rhachis narrowly winged, flattened, 0.8–1.2 mm wide, glabrous on margins. Spikelet packing 2–4-rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, curved, dorsally compressed, plano-convex, 2–2.3 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, purple, 3 -veined, acute. Fertile lemma elliptic, 2–2.3 mm long, indurate, pallid, without keel, 5 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Fiji (*). **Western South America, Brazil, Southern South America.** Bolivia. Brazil West Central. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.

TDWG4. Jujuy, Salta, Santiago del Estero. Buenos Aires, Chaco, Corrientes, Entre Rios, Formosa, Santa Fe.

Paspalum sodiroanum Hack. *Oest. Bot. Zeitschr.* 51:237 (1901).

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 Ecuador. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Sodiro s.n.*, 1886, Ecuador: Prov. unknown: Azucar, 2000 m (W; IT: P, US-285600 (fragm. ex W)).

Recent Synonyms: *Paspalum peruvianum* Mez, *Repert. Spec. Nov. Regni Veg.* 15: 28 (1917).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Luigi Sodiro (1836–1909) Italian-born Ecuadorean cleric and amateur botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 40–50 cm long, rooting from lower nodes. Culm-internodes elliptical in section. Lateral branches ample. Ligule an eciliate membrane, truncate. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 6–12 cm long, 10–15 mm wide, flaccid. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 20–45, borne along a central axis, unilateral, 2.5 cm long. Central inflorescence axis 10–20 cm long. Rhachis broadly winged, foliaceous, 2 mm wide. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 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, plano-convex, subacute, 2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 1 -veined, without lateral veins, obtuse. Fertile lemma oblong, 2–2.5 mm long, indurate, pallid or yellow, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex obtuse or acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, obovoid. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. **Western South America.** Colombia, Ecuador, Peru.

Paspalum soukupii E.Carbono. *Ann. Missouri Bot. Gard.*, 82(1): 112 [Feb.] (1995).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Soukup* 5282, 8 Aug 1964, Peru: Loja: Quebrada Verrugas, S. Bartolomé, 2000 mt (US-2528419).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Jaroslav Soukup (1903–1989) Czech missionary and ethno-botanist who collected in Peru.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 30–50 cm long. Culm-internodes 5–13 cm long, yellow, striate, distally glabrous. Culm-nodes brown, pubescent. Lateral branches lacking. Leaf-sheaths 4–10 cm long, mostly shorter than adjacent culm internode, pilose, outer margin hairy. Ligule a ciliate membrane, 1–1.5 mm long. Collar pubescent. Leaf-blades linear or lanceolate, 3–9 cm long, 3–6 mm wide. Leaf-blade surface pilose, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, exserted or embraced at base by subtending leaf. Peduncle 10–17 cm long, glabrous. Racemes 8–23, borne along a central axis, ascending, unilateral, 1–3.3 cm long. Central inflorescence axis 4–8 cm long, glabrous or puberulous. Rhachis deciduous from axis, broadly winged, membranous, 1.8–2.5 mm wide, puberulous on surface, scaberulous on margins, terminating in a barren extension, extension flattened. Spikelet packing abaxial, 1 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–0.5 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 or ovate, dorsally compressed, acute, 2–2.7 mm long, 0.7–0.9 mm wide, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Fertile lemma elliptic or ovate, 2–2.7 mm long, indurate, pallid or purple, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.4–1.7 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.7 mm long, dark brown. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Paspalum sparsum Chase. *Publ. Carnegie Inst. Wash. No.* 436, P. 341 (1934).

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: HT: *J.R. Swallen* 2633, 20 Jul 1932–21 Jul 1932, Mexico: Yucatan: along road through brush, Uxmal (US-1537442).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms slender, 100 cm long. Culm-internodes distally pilose. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Leaf-sheath oral hairs bearded. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 18–30 cm long, 5–12 mm wide. Leaf-blade surface pubescent, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 8, borne along a central axis, unilateral, 2.5–9.5 cm long. Central inflorescence axis 17 cm long, pilose. Rhachis wingless, angular, 0.8 mm wide. Raceme-bases brief, pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, 1.5 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, membranous, 3 -veined, pubescent, obtuse. Fertile lemma obovate, 1.5 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Southeast Mexico.

TDWG4. Yucatan.

Paspalum squamulatum Fourn. *Mex. Pl. Enum., Gram.* 11 (1886).

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: IST: *F.M. Liebmann 197*, May 1841, Mexico: Huitmalco, Tinzutlan (US-207651). LT: *Bourgeau 2640*, 24 Jul 186?, Mexico: Veracruz: Orizaba (P; ILT: US-2856011, US-951635). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 118 (1929). IST: *Liebmann 198*, May 1841, Mexico: in graminosis prope Chinantla, 1000 ft (MO, US-207651). ST: *Botteri 115*, Mexico: Veracruz: Orizaba.

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (452, Fig 170).

Derivation (Clifford & Bostock 2007): L. squama, scale; -ula, diminutive; -atum, possessing. Paleas, lemmas and glumes well developed.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 20–60 cm long, 1–2 mm diam., rooting from lower nodes. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths longer than adjacent culm internode, keeled, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 2.5–4.5 mm long, brown, lacerate. Collar glabrous or pubescent. Leaf-blade base broadly rounded. Leaf-blades 7–11 cm long, 8–13 mm wide, dark green. Leaf-blade midrib keeled beneath. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, unilateral, 2–8 cm long. Central inflorescence axis 2–4 cm long. Rhachis wingless, angular, 0.5–0.7 mm wide. Raceme-bases brief, pilose. Spikelets in pairs. 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 obovate, dorsally compressed, obtuse, 1.5–1.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 1.3–1.7 mm long, 0.9 length of spikelet, membranous, without keels, 3(–5) -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined. Fertile lemma ovate, 1.5–1.7 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.8–0.9 mm long, brown. Caryopsis with adherent pericarp, ellipsoid. $2n = 40$ (2 refs TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica. Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama.

TDWG4. Mexico State, Morelos, Puebla. Durango, Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Baja California Sur, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas.

Paspalum standleyi Chase. *Journ. Wash. Acad. Sc.* xvii. 146. (1927).

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: *P.C. Standley 30543*, 11 Jan 1924, Panama: Panama (US-1269445).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Paul Carpenter Standley (1884–1963) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated. Culms erect, 10–32 cm long, 0.5–1 mm diam. Culm-internodes thick-walled, distally glabrous or pilose. Culm-nodes pubescent. Leaf-sheaths glabrous on surface or pilose, outer margin hairy. Ligule an eciliate membrane, 0.2 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long, petiole pubescent. Leaf-blades 2.5–7 cm long, 2.5–5 mm wide. Leaf-blade surface glabrous or pubescent, sparsely hairy. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, digitate, unilateral, 1–3 cm long. Central inflorescence axis 0.5–1 cm long. Rhachis wingless, flattened, 0.5–0.6 mm wide. Spikelet packing abaxial, 2 -rowed. 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, compressed strongly, acute, 1.4–1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 2 -veined. Upper glume primary vein absent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 2 -veined, without midvein. Fertile lemma elliptic, 1.2–1.3 mm long, coriaceous, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, coriaceous.

Flower and Fruit. Anthers 3, 0.8–0.9 mm long, dehiscent by a longitudinal slit or dehiscent by a subapical slit, purple. Caryopsis with adherent pericarp.

$2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America. Costa Rica, Honduras, Panama. Venezuela. Ecuador.

Paspalum stellatum Fluegge. *Gram. Monog.* 62. (1810).

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: *F.W.H.A. von Humboldt & A.J.A. Bonpland s.n.*, no date, Colombia: Tolima (B-W; IT: BM, US-80051 (fragm.)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (197, Fig. 123), S.A.Renvoize, *Gramineas de Bolivia* (1998) (452, Fig. 98), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (918, Fig. 184, 922, Fig. 185 & 924, Fig.187), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (377, Fig. 156), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (454, Fig. 171), B.Rosengurt, *Gramineas Uruguayas I* (1970) (348, Fig. 151).

Derivation (Clifford & Bostock 2007): L. star-shaped. Hairs at the base of the spikelet spreading stellately at maturity.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 40–80 cm long. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades erect, filiform or linear, involute, 8–25 cm long, 2–3 mm wide. Leaf-blade surface pilose, hairy adaxially, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Peduncle tipped by a glumaceous appendage. Racemes 1–2, single or paired, unilateral, 2.5–12 cm long. Rhachis broadly winged, membranous, folded longitudinally to embrace spikelets, with rounded midrib, 5–7 mm wide, light-coloured (yellow and purple), terminating in a barren extension, extension subulate. Spikelet packing abaxial, crowded, regular, 2 -rowed. Raceme-bases brief, pubescent. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, compressed strongly, plano-convex, acute, 3 mm long, falling entire. Spikelet callus pilose.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 2 -veined, ciliate on margins, bearing hairs 2–3 mm long, acute. Fertile lemma ovate, 2.3–2.5 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 32$ (1 ref TROPICOS), or 56 (1 ref TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Costa Rica, El Salvador, Guatemala, Honduras, Panama. Bermuda, Dominican Republic, Haiti. Venezuela. Bolivia, Colombia.

Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Roraima, Mato Grosso, Goias, Maranhao, Piaui, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Chaco, Corrientes, Entre Rios, Formosa, Misiones. Oaxaca. Chiapas.

Paspalum strigosum Doell ex Chase. *Monogr. Pasp.* :68 (1929).

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:** *Paspalum bicrurulum* Salzm. ex Döll, *Fl. Bras.* 2(2): 57 (1877). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Salzmann 674 (in part)*, Brazil: Bahia (MPU; IT: B, K (photo, SI), MO-2977308, MPU, P, US-1385528 (ex hb. Salzman & ex MPU), US-929645 (rt hand plant), US-s.n. (fragm. ex hb. Delessert), US-1385527 (ex MPU), US-2855806 (fragm. ex G)).

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (228, Fig. 84).

Derivation (Clifford & Bostock 2007): L. covered with short, bristle-like hairs. One or more organs covered with bristle-like hairs.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms 27 cm long. Ligule an eciliate membrane. Leaf-blades 4.5–7 cm long, 3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–4 cm long. Central inflorescence axis 0 cm long. Rhachis flattened. Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, pilose, acute. Fertile lemma elliptic, 2 mm long, indurate, without keel. Lemma surface puberulous. Lemma margins involute. Palea involute, indurate. Palea surface puberulous.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4. Bahia.

Paspalum subciliatum Chase. *Journ. Wash. Acad. Sc.* xvii. 144. (1927).

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.S. Hitchcock 8017, 6 Sep 1911, Panama: Canal Zone (US-734821; IT: US-952289).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. sub, approaching. Similar to *Paspalum ciliatum*.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes short. Culms erect, 15–45 cm long. Culm-internodes elliptical in section. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades erect, flat or conduplicate, 10–20 cm long, 2–3 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–6.5 cm long. Central inflorescence axis 0 cm long. Rhachis wingless, angular, glabrous on surface. Spikelet packing abaxial. Raceme-bases brief, pubescent. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, subacute, 2.2–2.4 mm long, 1.2–1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, mid-green, without keels, 3 -veined. Upper glume surface puberulous. Upper glume margins ciliolate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, mid-green, 3 -veined, ciliate on margins, fringed above, acute. Fertile lemma elliptic, 2.2–2.4 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 30$ (1 ref TROPICOS), or 40 (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Brazil. Panama. French Guiana, Guyana, Venezuela. Brazil West Central, Brazil North, Brazil Southeast.

Paspalum subfalcatum (Doell) Tutin. *Journ. Bot.* lxxii. 338 (1934).

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 subfalcatum* Döll, *Fl. Bras.*2(2): 181 (1877). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *R. Spruce* 2820, Nov 1852, Brazil: Amazonas: prope Panuré et Rio Vaupés (US-81115 (fragm. ex KR, K)).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (227, Fig. 170).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 520: Fig.22 (2005)).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent or pilose. Culms 25–60 cm long. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 7–20 cm long, 4–8 mm wide, flaccid. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1(–2), single, unilateral, 3–4 cm long. Rhachis angular. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, unequal, 1 mm long or 1.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, acute, 2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 2–2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Venezuela. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast.

Amazonas, Acre, Rondonia, Catarina, Rio Grande do Sul.

Paspalum subsesquiglume Doell. *Mart. Fl. Bras.* ii. II. 43. (1877).

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: ST: *E. Gardner* 2355, no date, Brazil: Piauí (P, US-2856007 (fragm. ex P)). ST: *G. Gardner* 2339, no date, Brazil: Piauí IST: *Gardner* 2339 bis, Brazil (B, BM, K, US-2856007 (fragm.), W). IST: *Gardner* 2354, Brazil (BM, K, US-2856008 (fragm. ex W), W).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (204, Fig. 75).

Derivation (Clifford & Bostock 2007): L. sub, approaching; sesqui, one half more; gluma, scale. Spikelets appearing to have one long and one short glume.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms erect, 30–100 cm long. Leaves without demarcation between sheath and blade. Leaf-sheaths pilose. Ligule an eciliate membrane, 1.5–2

mm long. Leaf-blades linear or lanceolate, 5–20 cm long, 5–14 mm wide. Leaf-blade surface pilose, densely hairy, hairy on both sides. Leaf-blade apex acuminate or attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–12, borne along a central axis, ascending or drooping, unilateral, 1–8 cm long. Rhachis narrowly winged, flattened, 0.8–1 mm wide. Spikelet packing crowded, 3–4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 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 obovate, dorsally compressed, plano-convex, 1.5–1.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.2–0.25 length of spikelet, membranous, without keels, 3 -veined. Upper glume margins ciliolate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pilose, acute. Fertile lemma elliptic, 1.5–1.7 mm long, indurate, without keel. Lemma surface papillose. Lemma margins involute. Palea involute, indurate. Palea surface papillose.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil North.

TDWG4. Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe.

Paspalum telmatum Swallen. *Phytologia*, xiv. 388 (1967).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 10926*, 14–17 Feb 1930, Brazil: Mato Grosso do Sul: Lagoinhas, between Campo Grande and Dourados (US-1500550; IT: SI, US-1500549).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. *telmatos*, pond. Growing in swamps or along swamp margins.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 50–60 cm long. Culm-internodes distally glabrous. Leaf-sheaths keeled, pubescent. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades erect, straight, 20–30 cm long, 3–6 mm wide. Leaf-blade surface pubescent, densely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–7, borne along a central axis, ascending, straight, unilateral, 3–5 cm long. Central inflorescence axis 6–8 cm long. Rhachis wingless, angular. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–1 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, acute, 3 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous. Fertile lemma obovate, 2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central. Paraguay.

Paspalum tenellum Willd. *Enum. Hort. Berol.* 89. (1809).

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), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Mexico. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Anon.*, Cult. in Berlin probably from material collected in Mexico (B-W-1608; IT: US-2856495 (fragm. ex B, M)).

Recent Synonyms: *Paspalum robustum* (Hitche. & Chase) S.Denham.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. slender. Culms or inflorescence branches slender.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms 15–160 cm long. Leaves cauline. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 2–3 mm long, brown. Leaf-blades lanceolate, 10–25 cm long, 10–20 mm wide. Leaf-blade surface pubescent. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, unilateral, 2–8 cm long. Central inflorescence axis 2.5–21 cm long. Rhachis wingless, 1 mm wide. Spikelet packing crowded, regular, 4 -rowed. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, 1.9–2.1 mm long, 1.2–1.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 0.66–1 length of spikelet, membranous, mid-green or purple (blotched), without keels, 3 -veined. Upper glume surface pilose, with tubercle-based hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, mid-green or purple (blotched), 3 -veined, pilose, with tubercle-based hairs. Fertile lemma elliptic, 1.7–2 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

$2n = 60$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Northwest Mexico, Southwest Mexico. **Mesoamerica, Caribbean, Western South America, Brazil.** El Salvador, Guatemala. Trinidad-Tobago. Colombia, Ecuador. Brazil Northeast.

TDWG4. Bahia. Distrito Federal, Mexico State, Morelos, Puebla. Aguascalientes, Guanajuato, Queretaro, Zacatecas. Veracruz. Sonora. Guerrero, Jalisco, Michoacan. Chiapas.

Paspalum thrasyoides (Trin.)S. Denham. *Ann. Missouri Bot. Gard.* 92(4): 521 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum thrasyoides* Trin., *Gram. Panic.* 126 (1826). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *G.H. von Langsdorff s.n.*, Dec 1824, Brazil: ubique in campis siccis (LE-TRIN-983.03; IT: MO-2100890 (probable), US-81396 (fragm. ex LE)).

Recent Synonyms: *Thrasya thrasyoides* (Trin.) Chase, *Proc. Biol. Soc. Wash.* 24: 114 (1911).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (510, Fig 114 as *Thrasya*).

Derivation (Clifford & Bostock 2007): Gk *-oides*, resembling. Resembling *Thrasya* with respect to the inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–100 cm long. Culm-nodes glabrous or bearded. Leaf-sheaths keeled, pilose, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 1.5–3 mm long, truncate. Leaf-blades linear or lanceolate, 4–15 cm long, 3–6 mm wide. Leaf-blade surface pubescent to pilose, with tubercle-based hairs. Leaf-blade margins glabrous or tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, arcuate, unilateral, 4.5–12 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets, 2.5 mm wide, glabrous on surface or pubescent on surface, tuberculate on margins, ciliate on margins, terminating in a barren extension, extension flattened. Rhachis hairs white or yellow. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 3–3.5 mm long, 0.9 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3 mm long, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1.5–2 mm long, 0.5–0.66 length of spikelet, chartaceous, without keels, 3–5 -veined. Upper glume margins tuberculate, ciliate. Upper glume apex emarginate.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret elliptic or oblong, 1 length of spikelet, coriaceous, sulcate or readily splitting into two halves, without hair tufts or with basal tufts of hair, 0–1 hair tufts in all, ciliate on margins (above), bearing white hairs, acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 2.8 mm long, coriaceous, without keel. Lemma surface papillose or striate, with conspicuous apical hairs. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Flower and Fruit. Lodicules 2, fleshy, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Bolivia. Brazil West Central, Brazil North, Brazil Southeast.

Paspalum thunbergii Kunth ex Steud. *Syn. Pl. Gram.* 28 (1854).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Japan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Japan, Nagasaki: Thunberg (UPS holo).

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (360, Fig. 141), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (592), C-C Hsu, *Taiwan Grasses* (1975), H.J.Noltie, *The Grasses of Bhutan* (2000) (713, Fig. 42), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 739), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:106(1980)).

Derivation (Clifford & Bostock 2007): in honor of Carl Pehr Thunberg (1743–1828) Swedish botanist and physician.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes short, knotty. Culms 40–90 cm long, 1–1.5 mm diam., 2–3 -noded. Lateral branches lacking. Leaf-sheaths 3–15 cm long, pilose. Ligule an eciliate membrane, 1–2 mm long, truncate. Leaf-blades 10–30 cm long, 5–10 mm wide. Leaf-blade surface pilose, hairy on both sides. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, borne along a central axis, unilateral, 3–8 cm long. Central inflorescence axis 3–8 cm long. Rhachis narrowly winged, angular, 1 mm wide, scaberulous on margins. Spikelet packing 2 -rowed. Raceme-bases brief, pilose, hairy at base. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.5–0.8 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate or orbicular or obovate, dorsally compressed, plano-convex, obtuse, 2.5–2.7 mm long, 1.9–2.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume orbicular, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume margins eciliate or ciliolate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma orbicular, gibbous, 2.5–2.7 mm long, indurate, without keel. Lemma surface punctate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. Caucasus, Western Asia, China, Eastern Asia. China South Central, China North-Central, China Southeast. Japan, Korea, Nansei-Shoto, Taiwan. Japan Honshu, or Shikoku, or Kyushu. **Indian Subcontinent.** Eastern Himalaya, India. Niue.

TDWG4. Hebei, Shaanxi, Shandong. Anhui, Fujian, Guangdong, Guangxi, Henan, Hunan, Jiangsu, Jiangxi, Zhejiang. Guizhou, Hubei, Sichuan, Yunnan. Darjeeling, Bhutan, Sikkim.

Paspalum tillettii G. Davidse & F. Zuloaga. *Novon*, 2(3): 195 (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 Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: G. Davidse, O. Huber, S.S. Tillett 16920, 30 Apr 1979–1 May 1979, Venezuela (MO-2745633).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Stephen Szlatenyi Tillett (1930-) United States botanist resident in Venezuela.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pilose, with white hairs. Culms 23–62 cm long. Culm-internodes distally glabrous or pubescent. Culm-nodes brown, glabrous or pubescent. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths without keel, striately veined, glabrous on surface or pilose. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.2–0.5 mm long. Leaf-blades filiform, involute, 4–17 cm long, 0.3–0.6 mm wide. Leaf-blade surface ribbed, grooved adaxially. Leaf-blade margins glabrous or ciliate, hairy at base.

Inflorescence. Inflorescence composed of racemes. Peduncle 8–22 cm long, glabrous. Racemes 2, paired, flexuous, unilateral, 1.5–6 cm long. Central inflorescence axis 0 cm long. Rhachis wingless, angular, 0.2–0.5 mm wide. Spikelet packing abaxial. Raceme-bases brief, hirsute, with 2–4 mm long hairs. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–0.5 mm long, glabrous or 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 elliptic, dorsally compressed, plano-convex, 1.4–1.8 mm long, 0.7–0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure or two, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.5–0.66 length of spikelet. Lower glume surface pilose. Upper glume ovate, 0.9–1 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins obscure. Upper glume surface glabrous or pubescent, with capitate hairs. Upper glume margins ciliate (with capitate hairs). Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 2–3 -veined, without midvein or with obscure midvein, obscurely veined, glabrous or pubescent, with capitate hairs, ciliate on margins (with capitate hairs). Fertile lemma elliptic, 1.4–1.8 mm long, 0.7–0.8 mm wide, indurate, dark brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.8–1 mm long. Caryopsis with adherent pericarp, obovoid, 0.8–1 mm long. Embryo 0.4 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America. Venezuela. Colombia.

Paspalum tinctum Chase. *Contrib. U. S. Nat. Herb.* xxviii. 62 (1929).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 7404, 1 Oct 1910, Mexico: Guanajuato: Irapuato, in moist sandy clay plain, alt. 1900 m (US-929014).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. tincto*, dye. Inflorescence branches reddish.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 100–150 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 2 mm long. Leaf-blades conduplicate, 15–40 cm long, 4–10 mm wide, stiff. Leaf-blade surface glabrous or pubescent, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 15–18, borne along a central axis, unilateral, 1–9 cm long. Central inflorescence axis 3–6 cm long. Rhachis narrowly winged, flattened, 1.5–2 mm wide, dark-coloured (purple). Spikelet packing 4 -rowed. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, obtuse, 2.4–2.6 mm long, 1.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or puberulous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous or puberulous. Fertile lemma elliptic, 2–2.5 mm long, indurate, pallid, without keel. Lemma surface smooth. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica.** Guatemala.

TDWG4. Distrito Federal, Mexico State, Morelos, Puebla. Guanajuato. Guerrero, Jalisco, Michoacan, Nayarit.

Paspalum tolucense R. Guzman. *Phytologia*, 51(7): 466 (1982).

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: HT: *R. Guzmán M. 4024*, Mexico: México (IBUG-32595).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Toluca, Mexico.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 15–35 cm long. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Ligule an eciliate membrane, 1.3–2.3 mm long. Leaf-blades 2–15 cm long, 4–8 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2(–3), paired, unilateral, 1–2.5 cm long. Rhachis wingless, flattened, 0.6–1.3 mm wide. Spikelet packing abaxial. Raceme-bases pubescent. 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 obovate, dorsally compressed, 2.2–2.6 mm long, 1.1–1.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous. Fertile lemma obovate, 2.2–2.6 mm long, indurate, yellow, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico.

TDWG4. Mexico State.

Paspalum trachycoleon Steud. *Syn. Pl. Gram.* 28. (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 Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *N. Funck 742*, 9 Oct 1843, Venezuela. Valencia (P; IT: BM, G, K, P, US-80059 (fragm. ex P), W).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. trachys, rough; koleos, sheath. Base of leaf-sheath scabrid.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms leaning or rambling, 100–200 cm long. Culm-internodes distally glabrous. Culm-nodes bearded. Lateral branches ample, arising from mid culm or upper culm. Leaves cauline. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 2 mm long, brown. Leaf-blades 10–18 cm long, 8–15 mm wide, glaucous. Leaf-blade surface pubescent, densely hairy, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–14, borne along a central axis, linear or lanceolate, unilateral, 3–6 cm long. Central inflorescence axis pubescent. Rhachis broadly winged, herbaceous, 4–5 mm wide, drab or dark-coloured (green or purple). Spikelet packing crowded. Raceme-bases brief, hirsute. Spikelets in pairs. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, acute, 2.2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 2–3 -veined. Upper glume primary vein

absent or obscure. Upper glume surface pilose, hairy below, with marginal tufts of hair (single 2–3mm hair). Upper glume margins ciliate. Upper glume hairs 1 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3–5 -veined, sulcate. Fertile lemma elliptic, 2.2 mm long, 0.9 mm wide, indurate, without keel. Lemma surface glabrous or pubescent (a few hairs). Lemma margins involute. Lemma apex acuminate, pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Southwestern USA, Southeastern USA, Mexico. Mesoamerica, Northern South America, Western South America, Brazil. El Salvador, Guatemala, Honduras. Venezuela. Colombia. Brazil West Central, Brazil Southeast.

TDWG4. Mato Grosso, Goias, Minas Gerais, Rio de Janeiro, Espirito Santo. Oaxaca. Chiapas.

Paspalum trianae Pilger. *Engl. Jahrb.* xxvii. 18. (1895).

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: *J.J. Triana 271*, Colombia (B; IT: K, P (probable), US-824225 (fragm. ex B), US-80046 (fragm. ex B), US-1574210 (probable)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Josi Gersnimo Triana (1828–1890) Columbian botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms decumbent, 50–90 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane. Leaf-blades lanceolate, 4–7 cm long, 4–7 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, borne along a central axis, unilateral, 3–5 cm long. Central inflorescence axis 2–5 cm long. Rhachis narrowly winged, angular, dark-coloured (purple). Spikelet packing abaxial, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, obtuse, 3–3.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, smooth or wrinkled, acute. Fertile lemma elliptic, 2.5–3 mm long, indurate, pallid, shiny, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America. Venezuela. Colombia.

Paspalum trichophyllum Henrard. *Blumea*, iv. 513 (1941).

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: *André Goeldi 165*, Jan 1918, Brazil: Pará: Estate Gavinho, Marajó Island, open savannas, clay soil (L-924,321–190; IT: MO-912393, US-1039599, W).

Recent Synonyms: *Paspalum humigenum* Swallen, *Phytologia* 14: 362 (1967).

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (224, Fig. 83 as *P. humigenum*).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (97: 31, Fig.9 (2010)).

Derivation (Clifford & Bostock 2007): Gk. thrix, hair; phyllon, leaf. Leaf-blades hair-like.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 30–50 cm long. Culm-internodes distally glabrous. Culm-nodes black, glabrous. Lateral branches lacking. Leaf-sheaths keeled, hirsute. Ligule an eciliate membrane. Leaf-blades flexuous, filiform, involute, 1 mm wide, flaccid. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 5, borne along a central axis, unilateral, 2–2.5 cm long. Rhachis angular, glabrous on surface. Spikelet packing 4 -rowed. Spikelets in pairs. 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, dorsally compressed, plano-convex, 2 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous. Fertile lemma elliptic, gibbous, 2.5 mm long, indurate, without keel. Lemma surface punctate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, and Brazil. Bolivia. Brazil West Central, Brazil Northeast, Brazil North.

TDWG4. Bahia.

Paspalum trichostomum Hack. *Oesterr. Bot. Zeitschr.* 51:235 (1901).

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: ST: A.F.M. Glaziou 22605 and 22596, no date, Brazil: Goiás (US-80011 (fragm.)). ST: Glaziou 22596, Brazil: Goyaz (W; IST: B, K, P, US-80011 (fragm. ex W), W). ST: Glaziou 22605, Brazil. Goias.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms erect, 60–70 cm long, 3 -noded. Lateral branches lacking. Leaf-sheath oral hairs bearded. Ligule an eciliate membrane. Leaf-blades flat or convolute, 20–30 cm long, 5–7 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, borne along a central axis, unilateral, 3–10 cm long. Central inflorescence axis 3–12 cm long. Rhachis angular. Spikelet packing irregular, 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, obtuse, 3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 3–5 -veined, obtuse. Fertile lemma elliptic, 3 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Southeast. Goias.

Paspalum trinii Swallen. *Phytologia*, xiv. 360 (1967).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: J.R. Swallen 4507, 9–10 May 1934, Brazil: Ceara (US-1613382; IT: K).

Illustrations (Books): No illustration found (BKS).

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. Annual. Culms erect, 90 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches ample, arising from lower culm. Leaf-sheaths mostly shorter than adjacent culm internode, antrorsely scabrous, pilose. Ligule an eciliate membrane, 2.5–3 mm long.

Leaf-blades 17–28 cm long, 3–4 mm wide. Leaf-blade surface scabrous, pilose, sparsely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 10–12, borne along a central axis, appressed or ascending, unilateral, 2–3.5 cm long. Central inflorescence axis 10 cm long. Rhachis angular, 0.8 mm wide, puberulous on surface, scabrous on margins, ciliate on margins (sparsely). Spikelet packing abaxial. 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 obovate, dorsally compressed, plano-convex, obtuse, 1.9–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblong or obovate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface scabrous. Upper glume margins scabrous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, scabrous, scabrous on margins. Fertile lemma oblong or obovate, 2.5 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Guyana. Brazil Northeast. Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe.

Paspalum trinitensis Mez) S.Denham. *Ann. Missouri Bot. Gard.* 92(4): 521 (2005).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Thrasya*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Thrasya*).

Basionym or Replaced Name: *Thrasya trinitensis* Mez, Fedde, *Repert.* xv. 125 (1918).

Illustrations (Books): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (286, Fig. 232as *Thrasya*).

Derivation (Clifford & Bostock 2007): *L. -ense*, denoting origin. From Trinidad, one of the two Caribbean islands that constitute the Republic of Trinidad and Tobago.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 20–30 cm long. Culm-internodes distally glabrous. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, keeled, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.7 mm long, pilose on abaxial surface. Leaf-blades 2–5 cm long, 1.5–3 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight, unilateral, 1.5(–8) cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 2 mm wide, glabrous on surface, tuberculate on margins, setose on margins, terminating in a barren extension, extension flattened. Rhachis hairs white or yellow. Spikelet packing alternately adaxial and abaxial, regular, 1 -rowed. Spikelets pectinate, in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, fused to internode, united wholly.

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, 2.5 mm long, 0.7 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure or two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0–0.3(–1.2) mm long, 0.1(–0.5) length of spikelet, hyaline, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous or puberulous. Lower glume apex acute. Upper glume elliptic, 0.33 length of spikelet, hyaline, without keels, 2–3 -veined. Upper glume primary vein absent or distinct. Upper glume margins pubescent. Upper glume apex emarginate or truncate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, coriaceous, sulcate and readily splitting into two halves, with conspicuous apical hairs, pubescent on midvein (above), acute. Palea of lower sterile floret becoming indurate on flanks at maturity. Fertile lemma elliptic, 2 mm long, coriaceous, without keel. Lemma surface papillose and striate, with conspicuous apical hairs. Lemma margins involute, ciliate, hairy above. Lemma apex acute. Palea coriaceous. Palea apex glabrous or ciliate.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America, and Brazil. Belize, Costa Rica, Honduras, Nicaragua. Guyana, Venezuela. Colombia. Brazil West Central, Brazil North.

Roraima, Para, Amapa, Minas Gerais, Rio de Janeiro, Espirito Santo.

Paspalum tuberosum Mez. *Fedde, Repert.* xv. 29 (1917).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Weberbauer 3815*, 16 Apr 1904, Peru: Cajamarca: supra San Pablo et supra San Miguel, alt. 2400–3000 m (B; IT: US-80057 (fragm.)).

ST: *Weberbauer 3932*, 7 May 1904, Peru: Cajamarca: supra San Pablo et supra San Miguel, alt. 2400–3000 m (B (photo); IST: US-80057 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. tuber, swelling; -osa, abundance. Culm bases matted with mud and mistakenly regarded as tuberous.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes short, tuberous. Culms slender, 12–35 cm long. Culm-nodes glabrous. Lateral branches ample. Ligule an eciliate membrane. Leaf-blades 3–5 cm long, 3 mm wide. Leaf-blade surface pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 3–9, borne along a central axis, unilateral, 1.7–2 cm long. Central inflorescence axis 1–3 cm long. Rhachis deciduous from axis, narrowly winged, terminating in a barren extension, extension flattened. Spikelet packing abaxial. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

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, plano-convex, 2–2.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, acute. Fertile lemma elliptic, 2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Paspalum tumidum Kuhl. *Arch. Jard. Bot. Rio de Janeiro*, iv. 349 (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: IT: *Coll. Ukn. 17907*, May 1922, Brazil: Paraiba (US-1255382 (fragm. ex RB)).

Recent Synonyms: *Paspalum crassum* Chase, *Contr. U.S. Nat. Herb.* 17(3): 239 (1913)

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. swollen. Spikelets inflated.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Annual. Culms 100–200 cm long, with prop roots. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 5 mm long, lacerate. Leaf-blades 15–60 cm long, 10–30 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, borne along a central axis, unilateral, 5–15 cm long. Rhachis broadly winged, foliaceous, 2.5–3.5 mm wide. Spikelet packing abaxial. 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, plano-convex, obtuse, 3.1–3.3 mm long, 1.7–2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, concave across back. Fertile lemma elliptic, 3–3.1 mm long, indurate, pallid, without keel. Lemma surface papillose and striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil.** El Salvador. Venezuela. Peru. Brazil Northeast. Goias. Mexico State. Colima, Guerrero, Jalisco, Michoacan. Chiapas.

Paspalum turriforme R.W. Pohl. *Fieldiana, Bot.*, n.s., 4: 455 (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 Costa Rica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: R.W. Pohl & G. Davidse 11699, 6 Feb 1969, Costa Rica: Cartago: 2 km W of Paraíso, 9.51N 83.52W, 1300 m (ISC; CR-47456).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (456, Fig 172).

Derivation (Clifford & Bostock 2007): *L. turris*, tower; *formis*, appearance. A robust species.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths glabrous or pilose. Basal innovations flabellate. Culms erect, robust, 200–300 cm long, 4–8 mm diam. Culm-internodes thin-walled, distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaf-sheaths keeled, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 2–5 mm long, brown, lacerate. Leaf-blades 40–95 cm long, 12–17 mm wide. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 40–150, borne along a central axis, ascending or drooping, unilateral, 7–11 cm long. Central inflorescence axis 15–40 cm long. Rhachis narrowly winged, 1.2–1.5 mm wide, ciliate on margins. Rhachis hairs 4–6 mm long. Spikelet packing 4 -rowed. Raceme-bases brief, pilose. Spikelets in pairs. 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 obovate, dorsally compressed, obtuse, 2.2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume obovate, 1 length of spikelet, membranous, purple, without keels, 3 -veined. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, obovate, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma ovate, 2.2–2.5 mm long, indurate, yellow, without keel. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.5–1.6 mm long, purple. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. **Mesoamerica.** Costa Rica, Guatemala, Honduras, Nicaragua. Michoacan. Chiapas.

Paspalum umbrosum Trin. *Mem. Acad. Petersb. Ser. VI. iii. II.* 153. (1834).

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: *unknown*, *unknown*, Brazil. São Paulo (LE; IT: US-952284 (fragm. ex LE)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. umbra*, any shady place; -osa, abundance. Growing in shady places.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly. Culms geniculately ascending, 80–100 cm long, 2–6 -noded. Culm-nodes brown, pubescent. Lateral branches lacking or sparse. Leaf-sheaths without keel, striately veined, pilose, with tubercle-based hairs. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades linear or lanceolate, 10–30 cm long, 8–15 mm wide. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 9–18, borne along a central axis, unilateral, 3–8 cm long. Rhachis angular, 0.5–0.8 mm wide, scabrous on margins, glabrous on margins or ciliate on margins.

Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 0.7–1 mm long, 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 oblong, dorsally compressed, plano-convex, 1.5–1.7 mm long, 0.8–1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic or oblong, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic or oblong, 1 length of spikelet, membranous, 3 -veined, pubescent, acute. Fertile lemma elliptic or oblong, 1.5–1.7 mm long, indurate, yellow, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, obovoid, light brown. Embryo 0.33 length of caryopsis.

N = 10 (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil Northeast, Brazil Southeast, Brazil South. Paraguay, Uruguay.

TDWG4. Sao Paulo Parana. Corrientes, Misiones.

Paspalum unispicatum (Scribn. & Merr.) Nash. *N. Amer. Fl.* xvii. 193 (1912).

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. **Basionym or Replaced Name:** *Panicum unispicatum* Scribn. & Merr., *Bull. Div. Agrostol., U.S.D.A.* 24: 14 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *C.G. Pringle 6717*, 13 Jul 1897, Mexico: Oaxaca: valley of Oaxaca, 3–6 ft (US-316929; IT: ISC, MO-2977107, P, W).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (600), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (209, Fig. 146), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (395, Fig. 165), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (381, Fig. 168).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 522: Fig.23 (2005)).

Derivation (Clifford & Bostock 2007): *L. unus*, single; *spica*, thorn; *-ata*, possessing. Inflorescences usually of a single raceme thereby resembling a spike.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes elongated, scaly. Culms 50–80 cm long. Ligule a ciliate membrane. Leaf-blade base broadly rounded. Leaf-blades 10–30 cm long, 8–15 mm wide. Leaf-blade surface scaberulous, glabrous or hirsute, hairy abaxially, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 7–20 cm long. Rhachis wingless. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, 2.9–3.3 mm long, falling entire.

Glumes. Glumes two or one to two the lower present in some spikelets, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.75 length of spikelet. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma ovate, 2.9–3.3 mm long, indurate, yellow or light brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific, North America, South America.

Country /Province /State. North-central Pacific. Hawaii. South-central USA, Mexico. Texas. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Honduras. Cuba. Venezuela. Bolivia, Colombia, Ecuador. Brazil West Central. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.

TDWG4. Catamarca, Jujuy, La Rioja, Salta, Santiago del Estero, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Santa Fe. Morelos, Puebla. Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Guerrero, Jalisco, Oaxaca.

Paspalum urbanianum Ekman. *U. S. Dept. Agric., Misc. Publ. No. 243: 237* (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 Dominican Republic. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman H 13712*, 9 Oct 1929, Dominican Republic: Hispaniola I., Azua Prov. (US-1502227).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (237, Fig. 190).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Ignatz Urban (1848–1931) German botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short, scaly. Butt sheaths persistent and investing base of culm. Culms 80–100 cm long. Lateral branches sparse, arising from lower culm. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 0.5–1 mm long. Collar pilose. Leaf-blades aciculate, terete, 30–60 cm long, 1.5–2 mm wide, stiff. Leaf-blade apex pungent.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, borne along a central axis, flexuous, unilateral, 8–15 cm long. Central inflorescence axis 8–20 cm long. Rhachis wingless, flattened, 0.7–0.8 mm wide. Spikelet packing abaxial, lax or distant. Spikelets solitary or in pairs. 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, dorsally compressed, plano-convex, acute, 3.5–3.8 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma elliptic, 3 mm long, indurate, dark brown, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Dominican Republic.

Paspalum urvillei Steud. *Syn. Pl. Gram. 24.* (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), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae 5* (2000), S-L Chen et al, *Flora of China 22* (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960), T.G.Tutin et al, *Flora Europaea 5* (1980), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: 1825, *J.S.C. Dumont de Urville s.n.* (HT: P; IT: B, CN, US-80035 (fragm.)).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (Plt. 13), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (594), C-C Hsu, *Taiwan Grasses* (1975), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (331), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (223, Fig. 36), 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) (580), F.W.Gould, *The Grasses of Texas* (1975) (517, Fig. 272), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (230, Fig. 179), S.A.Renvoize, *Gramineas de Bolivia* (1998) (472, Fig. 102), S.A.Renvoize, *The Grasses of Bahia*, 1984 (210, Fig. 78), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (1004, Fig. 196 & 1012, Fig. 197), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (404, Fig. 169), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (533, Fig. 140), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (380, Fig. 167), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:107(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): in honor of Jules Sibastien Cisar Dumort d'Urville (1790–1842), French Naval Officer and botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations flabellate. Culms 80–250 cm long. Ligule an eciliate membrane, 3–5 mm long. Leaf-blades 20–30 cm long, 6–12 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, borne along a central axis, unilateral, 4–13 cm long. Central inflorescence axis 10–20 cm long. Rhachis narrowly winged, angular, 1 mm wide. Spikelet packing regular, 2–4 -rowed. Spikelets in pairs. Fertile spikelets sessile and 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, plano-convex, acute, 2–2.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 1 length of spikelet, membranous, yellow, without keels, 3 -veined. Upper glume surface pilose. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 3 -veined, pilose, acute. Fertile lemma ovate, gibbous, 2 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*), Pacific, North America, South America.

Region. Southwestern Europe.

Country /Province /State. : Portugal. **Macaronesia, West tropical Africa, South tropical Africa, Southern Africa** (*), **Middle Atlantic ocean, Western Indian ocean.** Canary Is. Liberia. Angola, Malawi, Zimbabwe. Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Kwazulu-Natal, Western Cape, Eastern Cape. Mauritius (*), Madagascar (*). **China, Eastern Asia.** China Southeast. Nansai-Shoto, Ogasawara-shoto, Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** India, Sri Lanka. Laos. Java, Malaya, Philippines. New Guinea West Papua (Irian Jaya). New Guinea. **Australia, New Zealand.** Western Australia (*), Queensland (*), New South Wales (*), Victoria (*), Tasmania (*). Kermadec Is, New Zealand North I. **Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific.** Fiji (*), New Caledonia (*), Samoa (*). Cook Is (*). Marianas (*). Hawaii (*). **Southwestern USA, South-central USA, Southeastern USA, Mexico.** California. Texas. Alabama, Arkansas, Florida, Georgia, Louisiana, North Carolina, South Carolina, Tennessee. Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, Guatemala, Honduras. Cuba. French Guiana. Bolivia, Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Argentina Northeast, Argentina Northwest, Chile Central, Chile South, Paraguay, Uruguay.

TDWG4. Fujian, Hong Kong. South-West. North, Central, South East, Inland. Coast, Western Slopes, Western Plains. Goias, Bahia, Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Catamarca, Jujuy, La Rioja, Mendoza, Salta, Santiago del Estero, San Juan, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Distrito Federal, Entre Rios, Formosa, La Pampa, Misiones, Santa Fe. Rest of Chile- Biobio, La Araucania, Maule, O'Higgins, Santado, Valpariso. Coquimbo, Maule, Biobio, La Araucania. Los Lagos. Mexico State, Morelos. Aguascalientes, Coahuila. Baja California Sur. Jalisco, Michoacan.

Paspalum usteri Hack. *Fedde, Repert. Nov. Sp.* v. 1 (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. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *A. Usteri* s.n., 25 Mar 1907, Brazil: São Paulo: Perus (W; IT: US-2764382 (fragm. ex W), US-1503195).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Alfred Usteri (1869–1948) Swiss horticulturalist and agriculturalist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly, hairy. Culms 100–200 cm long. Leaf-sheaths longer than adjacent culm internode, striately veined, glabrous on surface or pilose, with tubercle-based hairs. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 2–3 mm long, truncate. Leaf-blades lanceolate, 15–30 cm long, 10–20 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes few or numerous, 15–60, borne along a central axis, unilateral, 3–6 cm long. Central inflorescence axis 10–20 cm long. Rhachis angular, glabrous on surface or pubescent on surface. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, plano-convex, 2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.5–0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume margins tuberculate, ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous, acute. Fertile lemma elliptic, 2–2.5 mm long, indurate, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil Southeast. Paraguay.

TDWG4. Misiones.

Paspalum uyucense R.W. Pohl. *Ann. Missouri Bot. Gard.*, 73(2): 501 (1986).

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 Honduras. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Freytag s.n. (Van Schaack Herb. 3274)*, 26 Jul 1951, Honduras: Francisco Morazán: in high pine forest near cloud forest, trail to Uyuca Mountain, ca. 7 mi W of El Zamorano, near Tegucigalpa, alt. ca. 1400–1600 m (MO-2312543).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Cerro Uyuca, Honduras.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short, knotty, hairy. Culms erect, 40–65 cm long. Culm-internodes distally glabrous. Culm-nodes pubescent. Lateral branches sparse. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Leaf-sheath oral hairs ciliate, 5 mm long. Ligule an eciliate membrane, 0.5–0.8 mm long. Leaf-blades linear or lanceolate, 8–15 cm long, 8–11 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, digitate, unilateral, 4–6 cm long. Central inflorescence axis 1–2 cm long. Rhachis angular, 0.3–0.4 mm wide, ciliate on margins. Rhachis hairs 3–4 mm long. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, obtuse, 1.4–1.5 mm long, 0.9–1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 1.3 mm long, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous. Fertile lemma elliptic, 1–1.3 mm long, indurate, yellow, without keel. Lemma surface striate, glabrous. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.6–0.7 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Honduras.

Paspalum vaginatum Sw. *Prod. Veg. Ind. Occ.* 21 (1788).

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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), T.G.Tutin et al, *Flora Europaea* 5 (1980), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Jamaica. **Basionym or Replaced Name:** *Paspalum. distichum* auct. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Jamaica, *O.P. Swartz s.n.* (HT: S; IT: US).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (399, Fig. 151), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (232, Fig. 133), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (596), C-C Hsu, *Taiwan Grasses* (1975), K.M.Matthew, *Illustrations on the Flora of Tamilnadu Carnatic* (1982) (Pl. 908 & 909), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (109, Fig. 111), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (470, Fig. 403), N.Walsh & T.Entwistle, *Flora of Victoria Vol 2* (1994) (598, Fig. 121), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (331), 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) (576), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (200, Fig. 129), S.A.Renvoize, *The Grasses of Bahia*, 1984 (207, Fig. 76), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (379, Fig. 157), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (420, Fig. 154), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (524, Fig. 137), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (525, Fig. 355), B.Rosengurtt, *Gramineas Uruguayas I* (1970), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 736), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:108(1980)).

Images: H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005);, H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);.

Derivation (Clifford & Bostock 2007): *L. vagina*, sheath; -ata, possessing. Inflorescences concealed or partially concealed in uppermost leaf-sheaths.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms decumbent, 8–60 cm long. Ligule an eciliate membrane. Leaf-blades flat or convolute, 2.5–15 cm long, 3–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–5), paired or digitate, unilateral, 1.5–7.5 cm long. Rhachis narrowly winged, angular, 1–2 mm wide. Spikelet packing abaxial, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or ovate, dorsally compressed, compressed strongly, plano-convex, acute, 3–4.5 mm long, falling entire.

Glumes. Glumes both absent or obscure or two (rarely), reaching apex of florets, thinner than fertile lemma. Lower glume when present ovate, 0.1–0.2 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 2–3 -veined. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 2–3 -veined, acute. Fertile lemma ovate, 2.5 mm long, indurate, pallid, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. $N = 10$ (1 ref TROPICOS). $2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). **Continent.** Europe, Africa, Temperate Asia, Tropical Asia, Australasia, Pacific, North America, South America.

Region. Southwestern Europe, Southeastern Europe.

Country /Province /State. : France, Portugal, Spain. : Sicily. **Macaronesia, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean.** Canary Is, Madeira. Benin, Gambia, Ghana, Ivory Coast, Nigeria, Senegal, Sierre Leone. Cameroon, Gabon, Annobon, Principe & Sao Tome, Bioko, DRC. Socotra, Somalia. Kenya, Tanzania. Angola, Mozambique. Namibia, Kwazulu-Natal, Western Cape, Eastern Cape. Aldabra, Mauritius, Madagascar, Seychelles. **Arabian Peninsula, China, Eastern Asia.** Gulf States, Oman. China South Central, Hainan, China Southeast. Nansei-Shoto, Ogosawara-shoto, Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Sri Lanka. Andaman Is, Cambodia, Nicobar Is, Thailand, Vietnam. Cocos (Keeling) Is, Java, Lesser Sunda Is, Malaya, Singapore, Moluccas, Philippines, Sulawesi, Sumatra. New Guinea West Papua (Irian Jaya). New Guinea. **Australia, New Zealand.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales, Victoria, Lord Howe-Norfolk Is. New Zealand North I. **Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific.** Fiji, Niue, New Caledonia, Samoa, Tonga, Wallis-Futuna Is. Cook Is, Marquesas, Society Is, Tuamotu Is, Tubuai Is. Hawaii (*). **Southwestern USA, South-central USA, Southeastern USA, Mexico.** California. Texas. Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Bahamas, Bermuda, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is,

Windward Islands, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Argentina Northeast, Argentina South, Argentina Northwest, Chile North, Chile Central, Chile South, Paraguay, Uruguay.

TDWG4. Hong Kong, Yunnan, Assam, Haryana, Kerala, Madhya Pradesh, Orissa, Punjab, Rajasthan, Uttah Pradesh, West Bengal. Himachal Pradesh, Jammu Kashmir. Kimberley, South-West. Darwin & Gulf, Central Australia. Southern. North, Central, South East. Coast. Catamarca, Jujuy, Mendoza, Salta, San Juan, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Distrito Federal, Entre Rios, Formosa, La Pampa, Misiones, Santa Fe. Río Negro. Tarapaca, Antofagasta, Atacama. Coquimbo, Valparaiso, Santiago, Maule. Los Lagos. Mexico State, Puebla. Guanajuato, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Veracruz. Baja California, Baja California Sur. Colima, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum validum Swallen. *Phytologia*, xiv. 382 (1967).

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: *J.R. Swallen 3784*, 8 Mar 1934–13 Mar 1934, Brazil: Maranhão (US-1613226).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. robust.* Culms erect, stout.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, 150 cm long. Leaf-sheaths loose, 3–12 cm long, keeled, glabrous on surface or pubescent. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades 25–50 cm long, 10–15 mm wide. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 18, borne along a central axis, appressed or ascending, unilateral, 5–9 cm long. Central inflorescence axis 22 cm long. Rhachis angular, 0.7–0.8 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, 1–1.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, plano-convex, obtuse, 2.5–2.7 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.9 length of spikelet, membranous, without keels. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, glabrous. Fertile lemma ovate, 2.5 mm long, indurate, dark brown, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Paspalum vallsii R.C.Oliveira & G.H.Rua. *Syst. Bot.*30(3): 530 (-532; fig. 1) (2005).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil, Goias, Cavalcante: da Silva, Moreira & Perreira 6438 (CEN holo, BAA).

Illustrations (Journals): *Systematic Botany* (30:531, Fig.1 (2005)).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 95 cm long, 1.5 mm diam., 5–6 -noded. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Lateral branches lacking. Leaf-sheaths 7.5–9.5 cm long, hirsute, with tubercle-based hairs, outer margin hairy. Ligule an eciliate membrane, 0.5–0.6 mm long, brown, acute. Leaf-blades 15–26 cm long, 5–7 mm wide. Leaf-blade surface hirsute, densely hairy, hairy adaxially. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle 25–28 cm long. Racemes 2, paired, unilateral, 5–7 cm long. Rhachis narrowly winged, 1.3–1.4 mm wide, terminating in a barren extension. Spikelet packing crowded, 2 -rowed. 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, compressed strongly, plano-convex, 6.5–6.7 mm long, 3.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, exceeding apex of florets, thinner than fertile lemma. Upper glume ovate, auriculate at base, 1 length of spikelet, chartaceous, without keels, winged on margins, 5 -veined. Upper glume lateral veins with cross-veins. Upper glume margins eciliate. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, auriculate at base, 5.5–5.7 mm long, 0.8–0.9 length of spikelet, chartaceous, glabrous. Fertile lemma elliptic, 3.8–4.5 mm long, 1.3 mm wide, cartilaginous, pallid, without keel. Lemma margins involute, ciliolate. Lemma apex pubescent. Palea involute, coriaceous.

Flower and Fruit. Lodicules 2, 0.4 mm long. Anthers 3, 2 mm long, purple. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil North.

Paspalum variable (Fourn.) Nash. *N. Amer. Fl.* xvii. 180 (1912).

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. **Basionym or Replaced Name:** *Dimorphostachys variabilis* E. Fourn., *Mexic. Pl.* 2: 15–16(1886). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Ghiesbreght s.n.*, Mexico: absque loco (P; ILT: P, US-865861 (fragm. ex P)). LT designated by Chase, *Contr. U.S. Natl. Herb.* 28: 108 (1929). ST: *Bott.*, Mexico: Orizba (hb. Fourn.).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (92: 525: Fig.24 (2005)).

Derivation (Clifford & Bostock 2007): *L. varius*, variable; -abilis, indicating capacity. Species polymorphic and usually with many varieties.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 70–100 cm long. Culm-internodes elliptical in section, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths keeled, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 2–3 mm long. Collar pubescent. Leaf-blades ascending, 10–30 cm long, 7–18 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous, glabrous or ciliate.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes (1–)2–4, single or paired or borne along a central axis, unilateral, 4–9 cm long. Central inflorescence axis 2–7 cm long. Rhachis wingless, angular. Spikelets in pairs. Fertile spikelets sessile and pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or obovate, dorsally compressed, plano-convex, subacute, 2.9–3.2 mm long, 1.7 mm wide, falling entire.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2–0.75 length of spikelet, membranous, much thinner on margins, eglandular or glandular, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume surface pubescent. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, dark brown, glandular, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, dark brown, 5 -veined, pubescent, acute. Fertile lemma elliptic, 2.7 mm long, indurate, pallid, without keel. Lemma surface striate. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Pacific Is (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica.** Costa Rica, Guatemala, Honduras.

Morelos, Puebla. Hidalgo, Queretaro, Tamaulipas. Veracruz. Colima, Jalisco, Michoacan, Oaxaca. Chiapas.

Paspalum venezuelanum (Chase) A.G.Burman. *Acta Bot. Venezuel.*, 14(4): 90: (1987).

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:** *Thrasya venezuelana* Chase, *J. Wash. Acad. Sci.* 42(4): 122, f. 1 (1952). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 12407*, 11 Mar 1940, Venezuela: Federal District: sabanas de Cotiza (US-1762130; IT: VEN (fragm. ex US)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Venezuela.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50 cm long. Culm-internodes thin-walled, 4–6 cm long, distally hispid. Culm-nodes bearded. Lateral branches sparse, arising from lower culm. Leaf-sheaths longer than adjacent culm internode, as wide as blade at the collar, outer margin hairy. Ligule an eciliate membrane, 0.5 mm long, brown. Leaf-blades flexuous, flat or conduplicate, 15–20 cm long, 6–8 mm wide. Leaf-blade surface hispid. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes, terminal or terminal and axillary, with 1–3 peduncles per sheath. Racemes 1, single, arcuate, unilateral, 8–13 cm long. Rhachis narrowly winged, folded longitudinally to embrace spikelets, 2 mm wide, pubescent on surface, ciliate on margins. Spikelet packing irregular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. 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, turgidly plano-convex, subacute, 4 mm long, 2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface hispidulous.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, cartilaginous, 3 -veined, sulcate or readily splitting into two halves, hispidulous. Palea of lower sterile floret 1 length of lemma, pubescent, adorned on flanks. Fertile lemma ovate, 3.5 mm long, 1.5 mm wide, indurate, without keel. Lemma surface papillose. Lemma margins involute, pubescent. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America. Venezuela.

Paspalum veredense G.H. Rua, R.C. Oliveira, Valls & Graciano-Ribeiro. *Syst. Bot.* 33(2): 271–272, f. 2e-f, 5b, 6, 7a. (2008).

TYPE from Brazil. **Basionym or Replaced Name:** Brazil: Tocantins: Mun. Mateiros, Região do Jalapão, estrada Mateiros-São Félix, ca. provoado de Mumbuca, vereda da Extrema, 10°21'13.4"S, 46°36'49.9"W, 442 m, 9 Dec 2005, G.H. Rua, I.B. Figueiredo, J. M. de Rezende, R.F. Lima 695 (HT: CEN; IT: BAA, RB, US).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Culms erect, 70–110 cm long, 2 mm diam., 3–4 -noded. Culm-internodes terete, thin-walled, distally glabrous. Culm-nodes brown. Lateral branches lacking. Leaves without demarcation between sheath and blade. Leaf-sheaths 7–12 cm long, keeled, striately veined, glabrous on surface or hirsute, outer margin hairy. Ligule an eciliate membrane, 0.7 mm long, obtuse. Leaf-blades aciculate, terete, elliptic in section, 40–65 cm long, 1–1.5 mm wide, glaucous. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex pungent.

Inflorescence. Inflorescence composed of racemes. Peduncle 25–40 cm long, glabrous. Racemes 2–6, paired or digitate, flexuous, unilateral, 4.5–11.5 cm long. Central inflorescence axis 2–6 cm long, tip without extension or with blunt extension. Rhachis wingless, angular, 0.7–0.9 mm wide, scabrous on surface. Spikelet packing contiguous, 2 -rowed. Raceme-bases hirsute. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5–1 mm long, puberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, plano-convex, 3.8–4.8 mm long, 1.2–1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 3.7–4.6 mm long, 1 length of spikelet, membranous, glaucous, without keels, 5 -veined. Upper glume surface wrinkled. Upper glume margins ciliate. Upper glume hairs white, 1–2 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 3.7–4.6 mm long, 1 length of spikelet, membranous, wrinkled. Fertile lemma elliptic, gibbous, 3.5–3.8 mm long, 1.2–1.5 mm wide, coriaceous, pallid, without keel, 3 -veined, 0–3 -veined. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea embraced by lemma, involute, coriaceous.

Flower and Fruit. Lodicules 2. Anthers 3, 1.8 mm long, purple.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil North.

Paspalum vexillarium G.H. Rua, Valls, Graciano-Ribeiro & R.C. Oliveira. *Syst. Bot.* 33(2): 271–272, f. 2e-f, 5b, 6, 7a. (2008).

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Brazil: Distrito Federal: APA da Cafuringa, 15°27'27"S, 17°58'00"W, 22 Mar 2006, A.C. Amaral, E.S.G. Guarino, G. Pereira-Silva & J.R. Santos 28 (HT: CEN; IT: BAA, K, L, MO, RB, SI, US).

Illustrations (Journals): *Systematic Botany* (33: 269, Fig.4 (2008)).

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect, 60–75 cm long, 1 mm diam., 3–7 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes bearded. Lateral branches sparse, arising from lower culm. Leaves without demarcation between sheath and blade. Leaf-sheaths 1–11 cm long, keeled, striately veined, glabrous on surface or hirsute. Ligule an eciliate membrane, 0.3 mm long, erose, obtuse. Leaf-blades flat or involute, 15–25 cm long, 3–5(–10) mm wide. Leaf-blade surface glabrous or hirsute, hairy adaxially. Leaf-blade margins scabrous, ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle 9–17 cm long, pubescent above. Racemes 2–6, paired or borne along a central axis, unilateral, 2–6 cm long. Central inflorescence axis 2–6 cm long, tip subulate. Rhachis broadly winged, membranous, folded longitudinally to embrace spikelets, 5–12 mm wide, light-coloured (green, orange & purple), terminating in a barren extension, extension flattened. Spikelet packing abaxial, crowded, 2 -rowed. Raceme-bases pubescent. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets ovate, dorsally compressed, plano-convex, 2–2.9 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 2–2.9 mm long, 1 length of spikelet, membranous, pallid or light brown, without keels, 3 -veined. Upper glume surface pilose, hairy at apex, with tubercle-based hairs, with basal tufts of hair (2 tufts near apex). Upper glume hairs 2–2.5 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong or obovate, 1.6–2.3 mm long, 0.8 length of spikelet, membranous, 2 -veined, prominently veined, concave across back, pilose, hairy at apex, with marginal tufts of hair, 2 hair tufts in all (near apex), obtuse. Fertile lemma elliptic or ovate, 2–2.1 mm long, 0.7–0.8 mm wide, coriaceous, pallid, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface puberulous, hairy above. Lemma margins involute. Lemma apex acuminate. Palea involute, coriaceous. Palea surface puberulous, hairy above.

Flower and Fruit. Lodicules absent. Anthers 3, 2.2 mm long, yellow. Caryopsis with adherent pericarp, obovoid, dorsally compressed, plano-convex, 1.1 mm long. Hilum elliptic, 0.25 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast.

Paspalum virgatum L. *Syst. ed.* X. 855. (1759).

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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Jamaica. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Jamaica; *Browne s.n.* (LT: LINN-80.26).

Recent Synonyms: *Paspalum wettsteinii* Hack., *Ergebn. Bot. Exp. Sudbras.* 1: 5 (1906)

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (582), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (231, Fig. 181), S.A.Renvoize, *Gramineas de Bolivia* (1998) (471, Fig. 101), S.A.Renvoize, *The Grasses of Bahia*, 1984 (222, Fig. 82), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (239, Fig. 195), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (458, Fig. 172), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:109(1980)).

Derivation (Clifford & Bostock 2007): L. virga, broom; -ata, possessing. Inflorescence arms or culms held erect.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms robust, 100–200 cm long. Leaf-sheaths outer margin hairy. Ligule an eciliate membrane, lacerate. Leaf-blades 10–25 mm wide. Leaf-blade margins spinulose.

Inflorescence. Inflorescence composed of racemes. Racemes 10–16, borne along a central axis, spreading or drooping, unilateral, 7–15 cm long. Central inflorescence axis 15–30 cm long. Rhachis narrowly winged, angular. Spikelet packing 4 -rowed. Spikelets in pairs. 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 obovate, dorsally compressed, plano-convex, obtuse to subacute, 2.2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume oblong, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume margins ciliolate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 3 -veined, ciliolate on margins, obtuse. Fertile lemma orbicular, gibbous, 2.2–2.5 mm long, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. $2n = 40$ (2 refs TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, Australasia (*), North America, South America.

Country /Province /State. Western Indian ocean. Madagascar (*). **China, Eastern Asia.** Taiwan. **Malesia.** Java. **Australia.** Queensland (*). Hawaii (*). **South-central USA, Southeastern USA, Mexico.** Texas. Georgia. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Argentina Northwest, Paraguay, Uruguay.

TDWG4. North. Para, Amapa, Amazonas, Acre, Rondonia, Goias, Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Sao Paulo Parana. Jujuy, Salta. Mexico State, Morelos, Puebla. San Luis Potosi, Tamaulipas. Veracruz. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Paspalum virletii Fourn. *Mex. Pl. Enum., Gram.* 12 (1886).

Accepted by: 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: HT: *Virlet 1319*, no date, Mexico: San Luis Potosí (P; IT: US-80033 (fragm. ex P)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (596).

Derivation (Clifford & Bostock 2007): in honor of Pierre Theodroe Virlet d'Aoust (1800-?) who collected in Mexico.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, slender, 40 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheaths pubescent. Ligule an eciliate membrane, 1.5 mm long. Leaf-blades 10–14 cm long, 6–8 mm wide, flaccid. Leaf-blade surface pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 5, borne along a central axis, spreading, unilateral, 4–5.7 cm long. Central inflorescence axis 5.5 cm long. Rhachis wingless, angular. Spikelets in pairs. 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, plano-convex, obtuse, 2 mm long, 1.5 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, obtuse. Fertile lemma ovate, 2 mm long, indurate, yellow, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southwestern USA, Southeastern USA, Mexico. Arizona. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico.

TDWG4. Puebla. Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas. Veracruz. Sonora.

Paspalum volcanense F.O. Zuloaga, O. Morrone & S. Denham. *Novon*, 10(2): 183 (2000).

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: HT: *Kiesling et al. 5170*, 13 Feb 1985, Argentina. Jujuy: Dpto. Tumbaya: Volcán, cantera al SE del pueblo (SI; IT: MO, SI).

Illustrations (Journals): *Novon* (10: 185 Fig.1 (2000)).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Volcan, Argentina.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated, scaly, glabrous. Basal innovations extravaginal. Culms 45–60 cm long, 2.4–3 mm diam., 3–6 -noded. Culm-internodes 2.5–15 cm long, yellow, striate. Culm-nodes swollen, brown, glabrous or pubescent. Leaf-sheaths 9.5–22 cm long, keeled, striately veined, glabrous on surface or pilose, outer margin hairy. Ligule an eciliate membrane, 2–3 mm long, brown, truncate. Leaf-blades lanceolate, 12–22 cm long, 7–13 mm wide. Leaf-blade surface glabrous or pilose, hairy abaxially, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Peduncle 9–25 cm long, glabrous. Racemes 4–19, borne along a central axis, unilateral, 4–9 cm long. Central inflorescence axis 6–10 cm long, glabrous. Rhachis angular, 1–1.6 mm wide, ciliate on margins, terminating in a barren extension. Spikelet packing 4 -rowed. Raceme-bases pilose. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, oblong, unequal, 0.5–1.3 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, concavo-convex, 2.5–3 mm long, 1.1–1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume primary vein conspicuous. Upper glume surface pubescent. Upper glume margins tuberculate, ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, prominently veined, glabrous. Fertile lemma elliptic, 2.5–3 mm long, indurate, without keel, 7 -veined, more than 3-veined. Lemma surface papillose. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.3 mm long. Anthers 3, 1.6–2.2 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 2 mm long. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America and Southern South America. Bolivia. Argentina South.

TDWG4. Jujuy.

Paspalum wrightii Hitchcock & Chase. *Contrib. US. Nat. Herb.* xviii. 310 (1917).

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 Cuba. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *C. Wright 3843*, 189-, Cuba. Pinar del Rio (US-865562; IT: NY-71046 (fragm.)).

Recent Synonyms: *Paspalum platyaxis* (Doell) Mez, *Fedde, Repert.* 15: 73 (1917). *Paspalum hydrophilum* Henrard, *Meded. Rijks-Herb.* 45: 1, f. (1922).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (585), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (236, Fig. 188), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (467, Fig 82).

Derivation (Clifford & Bostock 2007): in honor of Charles Wright (1811–1885) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 150–170 cm long, rooting from lower nodes. Lateral branches lacking. Leaves cauline. Leaf-sheaths loose, longer than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1 mm long. Leaf-blades conduplicate, 20–40 cm long, 5 mm wide. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–9, borne along a central axis, ascending, unilateral, 4–8 cm long. Central inflorescence axis 8–10 cm long. Rhachis wingless, angular, 1.5–2 mm wide, scaberulous on margins, glabrous on margins. Spikelets in pairs. 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, dorsally compressed, plano-convex, acute, 2.2–2.5 mm long, 1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 3 -veined, acute. Fertile lemma elliptic, 2.2 mm long, 1.2 mm wide, indurate, dark brown, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. South-central USA, Mexico. Texas. Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America. Cuba. Venezuela. Bolivia, Colombia. Brazil West Central, Brazil North. Paraguay, Uruguay.

TDWG4. Para, Amapa. Chaco, Corrientes, Formosa, Santa Fe. Campeche, Tabasco, Yucatan.

Paspalum zuloagae G. Davidse & T.S. Filgueiras. *Novon*, 5(2): 148 (1995).

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>: *vide* TROPICOS and Kew Synonymy Database: HT: *A. Chase* 9578, 19 Apr 1925–25 Apr 1925, Brazil: Serra da Gramma, summit, mossy rock, 1700 m (US-1257002; IT: MO-930625).

Illustrations (Journals): *Novon* (5:149, Fig.2 (1995)).

Derivation (Clifford & Bostock 2007): In honor of Fernando Omar Zuloaga (1951-) Argentinian botanist.

Classification. Subfamily Panicoideae. Tribe: Paspaleae. Subtribe PASPALINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths purple. Culms 65–90 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaves mostly basal. Leaf-sheaths striately veined, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs lacking or ciliate. Leaf-sheath auricles erect, 5–13 mm long. Ligule an eciliate membrane, 4–11 mm long. Leaf-blades linear or lanceolate, 5–17 cm long, 6–12 mm wide, glaucous. Leaf-blade surface glabrous or pubescent, sparsely hairy, hairy adaxially. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 12–27, borne along a central axis, unilateral, 2–12 cm long. Central inflorescence axis 6.5–14 cm long, glabrous. Rhachis angular, 0.2 mm wide, glabrous on margins. Spikelet packing 4 -rowed. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.3–1 mm long, smooth, 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, dorsally compressed, plano-convex, obtuse, 2–2.5 mm long, 0.8–1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 0.66–1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or puberulous.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, glabrous or puberulous. Fertile lemma elliptic, 2–2.5 mm long, indurate, pallid, without keel, 5 -veined, more than 3-veined. Lemma surface striate. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1–1.5 mm long, purple. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Patis coreana (Honda) Ohwi. *Acta Phytotax. Geobot.* 11 (3): 181 (1942).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online, U. Quattrocchi, *CRC World Dictionary of Grasses* (2006), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006) (as *Stipa*), T. Koyama, *Grasses of Japan and its neighboring regions* (1987) (as *Orthoraphium coreanum*).

TYPE from Korea. **Basionym or Replaced Name:** *Stipa coreana* Honda, *Koryo-shikenrin-no-ippan*, 80 (1932). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Korea: in silvis Koryo ---, Sept. ---, *T. Nakai 13211* (HT: ?).

Recent Synonyms: *Orthoraphium coreanum* (Honda) Ohwi, *Bull. Nat. Sci. Mus. Tokyo* 33: 66 (1953). *Stipa grandifolia* Keng, *Sinensia*, 4: 322 (1934).

Achnatherum coreanum C, *J. Jap. Bot.* 17: 404 (1941).

Illustrations (Books): T. Koyama, *Grasses of Japan and its neighbouring regions* (1987) (210, Fig. 75 as *Orthoraphium*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 285 as *Stipa*).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Korea.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes short. Culms erect, 70–100 cm long, 2–3 mm diam., 7–8 -noded. Leaf-sheaths puberulous. Ligule an eciliate membrane, 0.7–0.8 mm long, erose, truncate. Leaf-blades linear or lanceolate, 10–30 cm long, 10–20 mm wide. Leaf-blade surface scabrous, rough on both sides.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 18–35 cm long, 2–3 cm wide. Primary panicle branches appressed, 1–2 -nate, 4–8 cm long, bearing 2–4 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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 lanceolate, dorsally compressed, compressed slightly, 13–16 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, herbaceous, without keels, 7–9 -veined. Lower glume lateral veins with cross-veins. Lower glume apex acute. Upper glume lanceolate, 13–15 mm long, herbaceous, without keels, 7–9 -veined. Upper glume lateral veins with cross-veins. Upper glume apex acute.

Florets. Fertile lemma lanceolate, subterete, 10–13 mm long, coriaceous, mid-green or light brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 22–35 mm long overall, without a column. Palea 0.9 length of lemma, 2 -veined, without keels. Palea surface pubescent, hairy on back.

Flower and Fruit. Anthers 3, 7 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China, Eastern Asia. China South Central, China North-Central, China Southeast. Japan, Korea. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu.

TDWG4. Hebei, Shaanxi. Anhui, Jiangsu, Jiangxi, Zhejiang. Hubei.

Patis obtusa (Stapf) Romasch., P.M. Peterson & Soreng. *Taxon* 60 (6): 1714 (2011).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online, U. Quattrocchi, *CRC World Dictionary of Grasses* (2006), T. Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from China. **Basionym or Replaced Name:** *Oryzopsis obtusa* Stapf, *Hook. Icon. pl.* 24: t. 2393. (1895). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *A. Henry 3507*, China: Hubei: Ichang and immediate neighborhood (K; ILT: LE (fragm.)). LT designated by Phillips & Wu, *Novon* 15(3): 474 (2005).

ST: *A. Henry 3896*, China (?).

T:

ST: *A. Henry 3896*, China: prov. Hupeh, Nanto (K).

Illustrations (Books): T. Koyama, *Grasses of Japan and its neighbouring regions* (1987) (212, Fig 76), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (354), C-C Hsu, *Taiwan Grasses* (1975).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.2393 (1895)).

Derivation (Clifford & Bostock 2007): L. blunt. Ligules truncate.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes short, knotty. Culms 75–110 cm long, 1.8–3.5 mm diam., 2–3 -noded. Leaves basal and cauline. Leaf-sheaths glabrous on surface.

Ligule an eciliate membrane, 1–2 mm long, truncate. Leaf-blades flat or involute, 8–25 cm long, 5–8 mm wide, stiff. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy adaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle antrorsely scabrous above. Panicle open, linear, 13–25 cm long, 2–3 cm wide. Primary panicle branches appressed, 2-nate, 1–5 cm long, bearing 2–7 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, dorsally compressed, 4.2–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 4–5 mm long, 1 length of upper glume, membranous, pallid, without keels, 5–7 -veined. Lower glume apex obtuse. Upper glume elliptic, 4–5 mm long, 0.9 length of adjacent fertile lemma, membranous, pallid, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Fertile lemma elliptic, dorsally compressed, 4.5–5.5 mm long, indurate, light brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma apex acute, awned, 1 -awned. Principal lemma awn 10–15 mm long overall, deciduous. Palea 1 length of lemma, indurate, 2 -veined, without keels.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 2.5–3 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China, Eastern Asia. China South Central, China Southeast. Nansei-Shoto, Taiwan.

TDWG4. Shaanxi, Guangdong, Henan, Hunan, Zhejiang, Guizhou, Hubei, Sichuan, Yunnan.

Patis racemosa (Sm.) Romasch., P.M.Peterson & Soreng. *Taxon* 60 (6): 1714 (2011).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Oryzopsis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Milium racemosum* Sm., *Cycl.* 15 (1813). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: T: *Muhlenberg* 30, 1793, USA: Pennsylvania: Lancaster (K; US (K illustr.)).

Recent Synonyms: *Oryzopsis racemosa* (Smith) Ricker ex Hitchcock, *Rhodora*, viii. 210 (1906). *Piptatherum racemosum* (Sm.) Barkworth, *Phytologia* 74(1): 19 (1993).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (150).

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 Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short, knotty. Culms erect, 30–90 cm long. Leaves cauline. Leaf-sheaths antrorsely scabrous. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 15–30 cm long, 8–15 mm wide. Leaf-blade surface scaberulous, rough abaxially, pubescent, hairy adaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 5–30 cm long. Primary panicle branches ascending or spreading, 5–11 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, dorsally compressed, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 7–8 mm long, 1 length of upper glume, membranous, without keels, 7 -veined. Lower glume apex acute or acuminate. Upper glume oblong, 7–8 mm long, 1 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acute or acuminate.

Florets. Fertile lemma oblong, dorsally compressed, 7–8 mm long, coriaceous, black, without keel. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn 10–25 mm long overall, deciduous. Palea coriaceous, 2 -veined, without keels.

Flower and Fruit. Anthers 4 mm long.

Distribution (TDWG). Continent. North America.

Country /Province /State. Eastern Canada, North-central USA, Northeast USA, Southeastern USA. Ontario. Illinois, Iowa, Minnesota, Missouri, Wisconsin. Connecticut, Indiana, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Tennessee.

